

Joint Fires Training Guide for a Corps Joint Task Force

James F. Love
Consultant

Advanced Training Methods Research Unit
Franklin L. Moses, Chief

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**EDGAR M. JOHNSON
Director**

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James F. Love

Technical review by

Halim Ozkaptan
Angelo Mirabella

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FOREWORD

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) conducts research on how to design unit training strategies. Within the past few years, its mission has been extended to include the Army's role in inter service training. This document is one of a series of reports that have been produced under the Joint and Multi-Service Distributed Training Testbed (JMDT2) program. The purpose of the program has been to apply the basic concepts of instructional systems design (ISD) to the development and management of inter service training. A critical feature of ISD is assessment of training progress and remedial feedback.

This product documents an application of ISD to BF 15, "Function to Coordinate, Synchronize, and Integrate Joint Fires as Accomplished by an Army Corps Acting as a Joint Task Force." It describes, in detail, the responsibilities, inputs, procedures, and outputs for staff elements and cells, as well as interactions among elements and cells. It is designed to be a source document for developing, short, easy to use self-assessment, diagnostic checklists. These, in turn, would be designed to support mini after action reviews at the staff element or cell level. Such reviews in the joint community may be referred to as facilitated after action reviews (FAARs).

The results of this research were briefed to the Chief of the Joint Doctrine Division (J724) at the Joint Training Analysis and Simulation Center, Atlantic Command, Suffolk, Virginia. In addition, the report was extensively reviewed by Army staff personnel at the Center.

ZITA M. SIMUTIS
Technical Director

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This training guide drew heavily upon the work of the team of general officer subject matter experts that BG Bill Mullen (US Army, Retired) put together to analyze Battlefield Function 15¹, the Battlefield Function to Coordinate, Synchronize, and Integrate Joint Fires as Accomplished by an Army Corps Acting as a Joint Task Force . Much gratitude is owed to the members on that team: LTG Tom Fields (US Army, Retired), LTG Pete Taylor (US Army, Retired), and MG Burt Moore (US Air Force, Retired).

¹ The term "Battlefield Function" was designated by the US Army Training and Doctrine Command (TRADOC) in September 1996, to replace the term "Critical Combat Function."

JOINT FIRES TRAINING GUIDE FOR A CORPS JOINT TASK FORCE

EXECUTIVE SUMMARY

Research Requirement:

Produce a source document describing the responsibilities and interactions of staff elements and cells involved in joint fires at the Corps Joint Task Force level. Intended purpose of the document was to support research on training self-assessment methodology for use in Corps JTF training simulations.

Procedure:

ARI products "How to Produce Training Guides from Battlefield Function Analysis" and "Analysis of the Function to Coordinate, Synchronize, and Integrate Joint Fires as Accomplished by an Army Corps Acting as a Joint Task Force" were used to analyze responsibilities and interactions among Corps staff elements involved in joint fires.

Findings:

Results of the analysis indicated above were collated and documented in the current research product.

Use of Findings:

The findings provide a basis for developing self-assessment checklists to be used experimentally in Corps-level mini after actions reviews.

JOINT FIRES TRAINING GUIDE FOR A CORPS JOINT TASK FORCE

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Joint Fires Training Guide for a Corps JTF

1. **Introduction.** General Heinz Guderian was a great student of the operational art. He developed "blitzkrieg" tactics, trained the German armored forces in their application, and masterminded the May 1940 campaign that defeated the French and British armies which were superior to the Germans in numbers and quality of tanks, artillery, and aircraft. In an address to students of the Kriegsakademie in Berlin, 1937, he had this to say about training:

"Wherever we are, we are always training: in our daily duties at the casernes, in formal training situations at our troop exercise areas, or in actual combat environments. Everything we do is training; and conversely, everything we don't do is training. Whether that training is teaching us good or bad habits depends largely on the steps we take to assess what it is we're doing, for what purpose we're doing it, and how well we're doing it." (Translated by the author from a plaque on the wall of the German General Staff College, Hamburg, Germany.)

The purpose of this training guide is to provide that assessment of *"what it is we're doing, for what purpose we're doing it, and how well we're doing it"* for training the staff of a corps joint task force (JTF) in joint fires operations.

2. Joint Fires Operations.

a. Joint fires operations cover the coordination, synchronization, integration, and use of target acquisition assets, indirect fire weapons, naval surface fires, armed aircraft, electronic counter-measures, and other lethal and non-lethal means against surface targets in support of joint operations. Joint fire support operations is a sub-set of and is included in joint fires operations.

b. Joint fire support operations cover the coordination, synchronization, integration, and use of target acquisition assets, indirect fire weapons, naval surface fires, armed aircraft, electronic counter-measures, and other lethal and non-lethal means against surface targets in support of a component or functional command.

c. This training guide describes the JTF staff participants and the tasks required to employ all aspects of joint fires and joint fire support assets available to and under JTF control (e.g., reconnaissance, surveillance, and target acquisition (RSTA) systems, artillery, close air support [CAS] and air interdiction* [AI], EW, psychological operations [PSYOP], naval surface fires [NSF], attack helicopters**, and C²W). [** Note: AI is included as an element of joint fires and joint fire support because the CJTF will consider the use of AI along with other fires beyond the FSCL to create conditions to shape the battlespace in order to achieve his intent. Historically, one of the main uses*

*of AI has been to set favorable conditions for ground operations.] [** Note: Attack helicopters are maneuver elements; however, they are also integral to providing fires in a joint environment. They have been included as an adjunct of joint fires and joint fire support operations, because the use of attack helicopters is a means of attack that will be considered by the CJTF and components.]*

3. Training Objective.

a. The overall training objective is: To train key sections of the corps JTF staff in planning and conducting joint fires operations.

b. The overall task for this training objective is: To coordinate, synchronize, and integrate all joint fires and joint fire support operations for the JTF in support of the commander's concept of operations and intent, maximizing mission accomplishment while minimizing risk to friendly forces, neutrals, and noncombatants.

c. The standards for this task (the bottom-line results or desired end-states that performance of the task will accomplish) are:

- 1) Joint fires and joint fire support operations planning provides for identification and attack of the enemy critical capabilities, vulnerabilities, and centers of gravity in support of the JTF and component(s) concept(s) of operations and, where appropriate, scheme(s) of maneuver.
- 2) JTF and component intelligence collection requirements are prioritized and assigned to component, theater, and national commanders and directors for collection by RSTA assets.
- 3) JTF staff monitors deployment and employment of required joint fires and joint fire support assets required to support Commander, Joint Task Force's (CJTF) intent and concept of operations. JTF orders to components establish effective supporting and supported relationships for fire support of anticipated operations.
- 4) Fire control measures facilitate flexible and responsive delivery of joint fires and joint fire support and minimize fratricide, collateral damage, and/or non-combatant casualties.
- 5) Battle damage assessment (BDA) confirms the destruction, neutralization, harassment, or interdiction of surface targets. BDA determines the effects of non-lethal fires.

d. The key JTF staff elements involved are: the J3 Plans Section, the J3 Ops Section, the J2 Staff Section, and the Joint Force Fires Coordination Element (JFFC-E). Detailed tasks and standards for each of the key staff sections involved are in Appendices A-D (J3 Plans - A, J3 Ops - B, J2 - C, JFFC-E - D).

e. Appendix E provides self-assessment tools for use in conducting an overall JTF joint fires after action review (AAR).

f. Appendices F-L are intended as resources for use by the key JTF staff sections involved in joint fires operations while training or in actual combat.

- Appendix F - Deep Operations Coordination Cell Description and Functions
- Appendix G - Battlefield Coordination Detachment Description and Functions
- Appendix H - Joint Targeting Coordination Board Description and Functions
- Appendix I - Joint Targeting Process
- Appendix J - Joint Fires Attack Systems Planning Considerations
- Appendix K - Joint Fires References
- Appendix L - Joint Fires Abbreviations

4. **Assumptions.** This training guide makes the following assumptions.

a. An Army corps headquarters (HQ) is dual-hatted as a JTF HQ subordinate to a unified or sub-unified command within a theater of operations. The JTF has service (i.e., Army, Navy, Air Force and Marine) and functional (i.e., air, land, naval, and special operations forces (SOF)) components. The corps commander will serve as the Joint Land Forces Component Commander (JFLCC) and the Army Component Commander (ARFOR) as well as the Commander, Joint Task Force (CJTF). *[Note: An Army corps commander may also serve as CJTF and designate a subordinate unit commander (e.g., division commander) the JFLCC. The decision whether or not to dual-hat is situationally dependent according to the factors of mission, enemy, troops available, terrain, and time (METT-T). In this training guide, the corps commander is dual-hatted, because performing the two roles is the more demanding scenario, and because corps that have been designated as potential JTFs routinely train using the dual-hat scenario.]*

b. The CJTF has directive authority over all components.

c. The corps HQ is augmented by joint personnel from a unified headquarters (similar to the current Deployable Joint Task Force Augmentation Cell (DJTFAC) organizations). The components also provide required staff augmentation and liaison in order to provide the corps with a full range of joint expertise and to facilitate information flow.

d. A Joint Force Fires Coordination Element (JFFC-E) has been formed from a combination of personnel from the Deep Operations Coordination Center (DOCC), the Corps Fire Support Element (FSE), the supporting Joint Force Air Component Commander's staff, and the Deployable Joint Task Force Augmentation Cell (DJTFAC) provided by the unified command. The JFFC-E is used in this training guide to describe the element of the J3 involved in the coordination, synchronization, and integration of joint fires and joint fire support operations. The Joint Force Fires Coordinator (JFFC) is the senior officer in charge of the JFFC-E. *[Note: Neither the JFFC nor the JFFC-E are*

recognized as approved joint terminology. However, a corps commander acting as a CJTF needs a staff element in the headquarters to coordinate with service and functional components concerning the application of joint fires and joint fire support operations and to keep the CJTF informed. That is the envisioned role of the JFFC and the JFFC-E.]

e. The CJTF may establish and task an organization within his staff to accomplish broad targeting oversight functions or may delegate this function to a subordinate commander. For the purpose of this training guide, it is assumed that the CJTF establishes a Joint Targeting Coordination Board (JTCB). The JTCB is normally chaired by the deputy CJTF. It will include component representatives, the J2, J3, JFFC, and other staff representatives as required.

f. The CJTF has designated the J3 as having primary staff responsibility for planning, coordinating, and integrating joint force command and control warfare (C2W) operations. Additionally, the CJTF has designated a C2W officer to coordinate the integration of C2W elements between various parts of the JTF staff, higher-echelon staffs, and component staffs. He participates in the JTCB process.

g. An implicit theme for this training guide is that the JTF's operation is limited in scope and duration. This affects the perspective from which tasks were developed. It also affects the organization of the JTF headquarters. In such a limited situation it is likely that the JTF headquarters would not form all the boards, offices, and sections available to a unified headquarters to manage discrete functions. With the exceptions of the JTCB and the joint planning group (JPG), responsibility for such functions is specified in this training guide in the form of tasks performed by the appropriate commander or staff officer. A more robust JTF headquarters can tailor the training guide for its situation by substituting the appropriate boards, offices, or sections for the commander or staff officer specified here.

h. Individual proficiency in service-related skills required to execute the collective tasks is assumed due to the experience level of officers and noncommissioned officers (NCOs) serving at corps/JTF level.

5. Self-Assessment and Feedback.

a. One of the major challenges to assessing training performance and giving meaningful feedback in the joint arena is finding the right people with the right expertise to conduct the assessment. At lower echelons, those personnel can be found in like units or in higher echelon units and can be tasked to perform assessment and feedback for other units' training. But for a joint task force at the corps level, it is often times impractical to task like or higher units for personnel. Additionally, during actual combat or for training at times other than during a major joint exercise, expert observers/controllers/trainers will not be present to provide necessary feedback. So where does one find the required expertise? It can be found among the corps JTF's own staff

personnel. Therefore, the training performance measures and feedback methods contained in this guide were designed for **self**-assessment by personnel in those JTF staff sections involved with joint fires operations.

b. Many of the tasks performed by the JTF staff in joint fires operations are process oriented, as opposed to outcome oriented. To perform the processes involves, to a large degree, the performance of military "art" based on collective judgment. This is something difficult to measure *objectively*. It was, therefore, necessary to derive mainly *subjective* performance measurement tools. These performance measures and metrics were designed for each of the key JTF staff sections and can be found in the Self-Assessment Tools sections of Appendices A-D.

c. The Self-Assessment Tools are to be used by the chief of each key JTF staff section to conduct a 10-15 minute mini-AAR (after action review) for his section at the conclusion of each iteration or phase of its joint fires processes. This allows him to give and receive feedback on how well the process was performed and on what needs to be fixed or improved for the next iteration. The Self-Assessment Tools:

- 1) Provide a reminder and a format to conduct on-going, semi-structured reviews of what's being done, for what purpose, and how well it's being done.
- 2) Provide a record of performance progress throughout the duration of a training exercise or during actual combat.
- 3) Provide a record of lessons learned for inclusion into the overall JTF Joint Fires AAR.
- 4) Identify tasks which require additional training or need added emphasis in future training exercises.

d. Appendix E provides self-assessment tools for use in conducting the overall JTF Joint Fires AAR. The JTF J3 is responsible for this AAR. Each of the key staff sections provide input based on their own mini-AARs.

APPENDIX A
J3 Plans Staff Section
Joint Fires Responsibilities

1. **Purpose.** This appendix identifies, organizes, and lists in logical sequence all of the J3 Plans Staff Section tasks necessary to perform its joint fires responsibilities.

2. **Establishment of Joint Task Force (JTF) and Initial Planning.**

a. Corps headquarters (HQ) receives the operations order (OPORD) from unified commander establishing the corps as a JTF and assigning mission and joint operations area (JOA).

b. The corps commander organizes the JTF HQ with personnel assigned from the unified command, his headquarters, and the components, and becomes Commander, JTF (CJTF). *[NOTE: Given the unified commander's assessment of the situation, he will ensure that the CJTF is provided the required personnel from his headquarters and other services to fully integrate a joint staff. Such augmentation often includes a deputy from another service.]*

c. J3 Plans begins initial planning.

1) Determines the conditions required to meet the desired military end state.

[NOTE: The desired military end state will be provided by the unified commander. It is one of the required conditions to achieve the national strategic end state. The two end states are not synonymous.]

2) Determines campaign objectives and tasks required to accomplish them.

3) Determines constraints and restrictions; e.g., rules of engagement, overflight restrictions, political considerations.

4) Reviews assigned forces to determine adequacy of the force to perform the tasks necessary to accomplish the mission. Assesses the proper mix of forces and deployment sequence of the JTF.

d. J3 Plans prepares briefing for J3 to present to CJTF and staff on mission and proposed planning timelines.

e. J3 Plans alerts subordinate components, service and functional, and informs them of the mission.

f. J3 Plans prepares meeting of JTF joint planning group (JPG) for component and functional planners in order to begin parallel planning.

g. J3 Plans coordinates with J2 to ensure the following:

- 1) That intelligence preparation of the battle space (IPB) is oriented on the JTF mission.
 - 2) That initial drafts of CCIR and EEI are prepared for JPG discussion.
 - 3) That the unified command Joint Intelligence Center (JIC) has been contacted for the following purposes:
 - a) Determination of availability of national and theater RSTA assets.
 - b) Update of intelligence database.
- h. J3 Plans obtains from the J4 information about the availability of ammunition and inter- and intra-theater transportation for ammunition and equipment.
- i. J3 Plans provides to the J4 an initial plan of what personnel will be in the JTF HQ advance element and what component forces will lead into the operational area. This will allow J4 to begin coordination with the unified command for deployment scheduling.
- j. J3 Plans initiates joint fires planning.
- 1) J3 Plans recommends designation of Joint Force Air Component Commander (JFACC). *[NOTE: The commander with the preponderance of air assets and the best ability to command and control assigned forces should be designated the JFACC. Therefore, the component providing the JFACC may change during phases of the operation based on the availability and arrival of air elements and command and control assets in the JTF AO. Alternatively, the JFACC may initially conduct operations afloat and transition ashore as the JOA matures to avoid changing the component providing the JFACC.]*
 - 2) J3 Plans recommends designation of a senior officer to oversee joint fires functions and to facilitate the coordination of joint fires and fire support within the JTF HQ and with service and functional components. As part of the J3 organization, he is provided the staffing necessary and may be designated as a Joint Force Fires Coordinator (JFFC). *[NOTE: The JFFC works under the staff supervision of the J3. The J3 must ensure that personnel from all components are provided to the JFFC in order to ensure requisite understanding of the capabilities and limitations of all forms of fires available to the JTF.]*
 - 3) J3 Plans recommends designation of the Airspace Coordination Authority (ACA). The ACA will normally be the JFACC.
 - 4) J3 Plans recommends designation of the Area Air Defense Commander (AADC). The AADC will normally be the JFACC.
 - 5) J3 Plans will establish and oversee the administration of the Joint Targeting Coordination Board (JTCB). An initial meeting will be scheduled to oversee JTF targeting functions and develop broad targeting guidance. *[NOTE: The CJTF may establish and task an organization within his staff to accomplish broad targeting oversight functions or may delegate this function to a subordinate commander. For the purpose of this analysis, it is assumed that the CJTF establishes a JTCB. The JTCB is normally chaired by the deputy CJTF. It will*

include component representatives, the J2 and J3, and other staff representatives as required.]

6) J3 Plans ensures that liaison and communications are established between the component fire planners and from the components to the JTF HQ to facilitate joint fire planning.

7) J3 Plans ensures that liaison and communications are established between the JTF HQ and coalition fire planners.

8) J3 Plans obtains from the J2 and the JFFC the means of delivery for fires and the target acquisition assets available to the JTF from components and coalition members.

3. Operational Mission Analysis and CJTF's Initial Planning Guidance.

a. J3 Plans continues to analyze the mission; all specified and implied tasks required for mission accomplishment are identified.

b. J3 Plans obtains information collected by J2 on threat forces order of battle, centers of gravity (and related high-payoff targets [HPTs]), and the nature and characteristics of the JOA and areas of interest.

c. J3 Plans coordinates with J2, J3, and J6 and begins planning command and control warfare (C2W) operations (encompasses OPSEC, PSYOP, EW, deception, and physical destruction of enemy command and control [C2] nodes and other C2W targets).

d. J3 Plans obtains information collected by Civil Affairs Staff Officer concerning locations of refugees; noncombatants; significant historic, cultural and religious structures; and population centers which may restrict delivery of fires and require fire support coordination measures (FSCMs), e.g., no fire areas (NFAs) and restricted fire areas (RFAs).

e. J3 Plans obtains information from SJA on rules of engagement (ROE).

f. J3 Plans facilitates JTCCB meeting and performs the following actions:

1) Based on the situation and understanding of the mission, drafts targeting guidance and priorities for CJTF approval.

2) Based on input from the J2, identifies high-value targets (HVTs) and prepares initial joint target lists (JTLs). *[NOTE: In some cases an initial target list will be provided by the unified command.]*

3) Assesses requirements for, and availability of, all target acquisition assets.

4) Identifies requirements for and availability of fires means to include CAS, AI, NSF, EW, PSYOP, and armed helicopters (attack, other).

g. J3 Plans monitors the deployment of all forces. Additionally, J3 Plans, assisted by the JFFC and the J2, monitors the components' positioning of assets to ensure that no gaps exist in supporting capabilities.

h. J3 Plans provides input to the J4, so that he can work time-phased force deployment data (TPFDD) with the unified command. Included in this input are JFFC's recommendations for required delivery date of joint fires assets.

i. J3 Plans briefs CJTF on their recommendation for CJTF Initial Planning Guidance. Briefing includes:

- 1) Restatement of mission based on operational mission analysis.
- 2) Initial statement of intent to include CJTF vision of tasks to be accomplished to achieve mission requirements, priorities for deployment and positioning of forces, and conditions to be achieved for the desired military end state.
- 3) Recommended CCIR and EEI.
- 4) Force protection measures.
- 5) Guidance for C2W operations.
- 6) Clear statement of intent for the use of fires and component fire support (to include priorities) and delineation of how these assets support the maneuver concept.
- 7) Timelines.

j. J3 Plans prepares message for CJTF to forward to unified commander outlining CJTF's concept of operations, near-, mid-, and long-term objectives; and requirements for theater level support. The J3 Plans, assisted by the JFFC, includes joint fires related input and coordinates with JTCB, component commanders, and J2 to identify initial requirements for theater level targeting and weaponeering support; e. g., Tomahawk land attack missile (TLAM) support. *[NOTE: Given the importance of the JFACC in planning and delivering joint fires, it is imperative that he be brought into the fire planning early on, so that J3 Plans clearly understands his concept of operations to include apportionment recommendations and integrates it into operational planning and course of action (COA) development.]*

4. Developing and Issuing Warning Order.

a. The JTF Warning Order is developed by J3 Plans for the JTF J3, is approved by the CJTF, and is disseminated to all subordinate and supporting units.

b. J3 Plans, assisted by the JFFC, provides the following information to the Joint Planning Group (JPG) and joint fires planners as a part of the JTF warning order.

[NOTE: The CJTF may establish a JPG to serve as a focal point for deliberate planning for the JTF.]

- 1) Priorities of fires, including joint fires capability required to provide adequate lethality for early deployers.

- 2) Host nation/coalition fire support systems available in the JOA.
- 3) Requirements for positioning of target detection and joint fires assets.
- 4) Fire coordination facilities and mechanisms; e.g., JFACC, JTCB, deep operations coordination cell (DOCC), battlefield coordination detachment (BCD), joint forces fires coordination element.
- 5) Permissive and restrictive fire control measures.
- 6) Special instructions on ROE, fire support communications, and logistic support.
- 7) Predicted impact of terrain and weather on fires.
- 8) Staging and marshaling areas for fires systems, to include those en route or proximate to the JOA.

5. Preparation of Mission Estimate to Include Development of Courses of Action.

- a. J3 Plans facilitates JTCB meeting.
 - 1) JTCB assists in development of estimate and COAs.
 - 2) JTCB reviews JFACC recommendations.
- b. J3 Plans, assisted by the JFFC, initiates estimate process based on restated mission, the CJTF's stated intent, and the factors of METT-T.
- c. After determining and identifying the availability of all target acquisition and delivery means, J3 Plans provides this data and a recommended deployment sequence and force mix to the JPG in order to assist in COA development.
- d. JPG considers all available fire support systems to include target acquisition assets when developing the joint fires estimate.
- e. Upon receipt of proposed COAs from JPG, J3 Plans, assisted by the JFFC, develops a fire plan for each COA which:
 - 1) Supports the CJTF's intent for fires.
 - 2) Provides required fires requested to support components' concept(s) of operations and scheme(s) of maneuver in accordance with the CJTF's priorities.
 - 3) Positions target acquisition and delivery systems to support the concept of operations. *[NOTE: Positioning of forces, including fires assets, is closely coordinated with the unified command and Department of State to ensure that required out-of-JOA country clearances can be obtained to marshal, stage, and overfly as necessary to support JTF operations.]*
 - 4) Exploits enemy vulnerabilities and attacks centers of gravity and related high-payoff targets.
 - 5) Ensures coordination, synchronization, and integration of strategic, operational, and tactical fires means.

f. J3 Plans obtains JFACC recommendations for apportionment and joint integrated priority target list (JIPTL).

g. J3 Plans monitors JFFC's coordination with all concerned to ensure that the JTF components and coalition partners understand each other's concepts of operation(s), priorities for fires, and targeting priorities in order to facilitate coordination of fires and ensure unity of effort.

6. Analysis and Comparison of Courses of Action.

a. J3 Plans, assisted by JFFC, supervises courses of action (COA) comparison process, paying particular attention to synchronization and integration of joint fires.

b. J3 Plans, assisted by JFFC, presents the fire plan for each COA which covers:

- 1) Recommended targeting guidance and priorities developed by the JTCB.
- 2) JFACC recommended air apportionment.
- 3) Changes in organization for combat and priorities in support of phased maneuver plans.
- 4) Permissive and restrictive fire support coordination measures.
- 5) Target-value analysis (TVA) of each COA. Factors influencing such analysis include:
 - a) Impact on enemy operations and probable responses.
 - b) Criticality of target as it relates to the success of the friendly mission.
- 6) Initial high-payoff target list (HPTL).
- 7) The best locations and times to attack HPTs, identified and expressed as TAls.
- 8) Detection and attack means for HPTs, to include backup means.
- 9) Decision points (DPs) or decision timelines (recorded on the DST).
- 10) Plans for expeditiously attacking both known and unknown time critical targets (TCTs).
- 11) Positioning and repositioning of all target acquisition assets and delivery systems.
- 12) Plans for the integration of PSYOP and EW assets.
- 13) Plans to conduct C2W warfare, including EW against enemy command, control, communications, computers, and intelligence (C⁴I) assets and PSYOP against personnel.
- 14) Options for the use of CAS, AI, and NSF.
- 15) Allocation of ground-based fires' assets to support the concept of operations.
- 16) Integration of movement and displacement of fires assets and units to follow the battle flow.
- 17) Linkage of BDA assets to the attack of HPTs.

c. J3 Plans compares COAs. During comparison process, J3 participates in the comparison and rating of each course of action in terms of the ability of available joint fires assets to support the CJTF intent.

d. Additional HPTs are developed from the COA comparison process and are added to the JTL.

e. The J3 chooses the course of action that is most supportable from a joint fires perspective and prepares his recommended COA for briefing to the CJTF. Components are informed.

f. J3 Plans briefs JTCCB on the recommended COA and facilitates meeting to ensure JTCCB reviews JFACC recommendations for apportionment for:

- 1) Compliance with CJTF intent.
- 2) Support of components' concepts of operations.

g. J3 Plans prepares briefing by J3 to CJTF on recommended COA. Briefing includes:

- 1) Description of each COA and including joint fires priorities (RSTA assets, AI, CAS, NSF, artillery, EW, PSYOP, deception operations), apportionment, and desired effects.
- 2) Rationale for selecting recommended COA.
- 3) Request for CJTF approval of recommended COA.

h. J3 Plans makes any modifications to the COA directed by CJTF and ensures that the following occurs:

- 1) Unified commander is informed of CJTF's decision.
- 2) Supporting and subordinate fire support commanders are notified regarding CJTF's decision.

3) Joint fires plans are adjusted by the JFACC and components to comply with the CJTF's guidance.

7. Preparation of JTF OPORD/FRAGO.

a. J3 Plans, assisted by the JFFC, finalizes joint fires plan, based on component input and coordination, to include preparation of paragraph 3a(2) Fires and the joint fires annex, complete with the JIPTL, protected targets list, joint fires execution matrix, and overlays.

b. J3 Plans obtains JIPTL from the JFACC for validation by the JTCB and approval by the CJTF. Once approved by the CJTF, targets are assigned by the JFACC on the ATO. Targets within component AOs which are not on the JIPTL and ATO are detected, engaged, and assessed by the components' organic and/or supporting fire support systems.

c. J3 Plans ensures that paragraph 3a(2) Fires includes the following:

1) Outline of joint fires plan, synchronization, and integration measures to support each phase of the battle.

2) Information relevant to apportionment.

3) Designation of components which have priority of joint fire support by phase.

[NOTE: Priority of fires is given to the maneuver unit by phase based on the CJTF's assessment, in his capacity of CJTF and LCC, of where he wishes to conduct the main effort. Additionally, priority of fires can be given to a particular phase of the battle if the commander determines that maximum fires at that point are critical to the success of the JTF mission.]

4) Designation of priority of use of low-density munitions.

5) Description of times, duration, and desired effects of supporting fires. *[NOTE: Attack guidance is provided to attack system managers via the attack guidance matrix (AGM). The AGM consists of target categories, specific HPTs, known TCTs, times when targets should be attacked, how they should be attacked, and any attack restrictions. It is prepared by the JFFC in consultation with J3 Plans.]*

6) Establishment of priority for requested joint air and naval surface fires.

d. J3 Plans ensures that the joint fires appendix of Annex C - Operations, with accompanying appendices, target list matrices, and overlays, reflects:

1) Enemy fire support capabilities including artillery, missiles and rockets, air defense, attack helicopters, tactical air, EW, naval surface fires, and NBC capabilities, as well as target acquisition capabilities.

2) Information regarding friendly forces mission and concept of fires, to include joint air and naval forces.

3) All fire support resources assigned, attached, and supporting the JTF.

- 4) Joint fires organization for combat, joint fires priorities, and concept for support; apportionment of joint fires.
- 5) Positioning and use of all target acquisition assets and delivery systems. A sensor/attack matrix may be used in order to ensure that all HPTs are acquirable and that a delivery system is available to attack the target.
- 6) JIPTL.
- 7) Instructions for attack of HPTs and time critical targets (TCTs).
- 8) Concept for use of air support (Air Force, naval air, USMC air, and armed helicopters).
- 9) Concept for field artillery support.
- 10) Concept for naval support
 - a) NSF.
 - b) Allocation of ANGLICOs.
- 11) Plans for offensive EW, PSYOP, and other non-lethal means of fires.
- 12) Permissive and restrictive FSCMs.
- 13) Airspace control.
- 14) ROE.
- 15) Rear battle to include allocation of joint fires to the tactical combat force (TCF).
- 16) Deception plan.

e. J3 Plans, with assistance from JFFC, ensures integration of joint fires and joint fires considerations into body and appropriate annexes of the OPOD/FRAGO.

- 1) Task organization.
- 2) Intelligence: Appendix 4 - Targeting.
- 3) Operations:
 - a) Appendix 3 - C2W.
 - b) Appendix 4 - PSYOP.
 - c) Appendix 7 - ROE.
 - d) Appendix 9 - Reconnaissance.
 - e) Appendix 10 - Counter C3.
 - f) Appendix 15 - Counterattack.
 - g) Appendix 17 - Amphibious operations.
 - h) Appendix - Joint fire support.
 - i) Appendix - Synchronization matrix.
 - j) Appendix - Forcible entry operations.
 - k) Appendix 19 - Airspace control plan (ACP).
- 4) Logistics: Appendix 6 - Non-nuclear ammunition.
- 5) Civil affairs.
- 6) Command relationships.
- 7) C3 systems.
- 8) Space operations.
- 9) Force protection.
- 10) Execution checklist.

f. J3 Plans coordinates with the J2 to ensure that the JTF collection plan satisfies BDA requirements.

g. J3 Plans coordinates with service and functional commands to share information and facilitate parallel planning.

8. OPORD/FRAGO Approval.

a. J3 Plans briefs the joint fires plan to include:

- 1) Joint fires organization for combat.
- 2) Concept for joint fires within the JOA and joint fire support to component operations.
- 3) Priorities of fires during all phases.
- 4) Apportionment.
- 5) JIPTL.
- 6) All fire control and coordination measures.
- 7) Location, status, and mission of target acquisition and delivery assets.
- 8) Timing of fires.
- 9) Detection and attack of HPTs and TCTs.
- 10) Use of preparatory and counter fires.
- 11) NSF plan.
- 12) Available resources and apportionment to air interdiction and close air support and a description of the component commanders' intents for the use of each.
- 13) Plans for joint air attack (JAAT).
- 14) Essential airspace control measures.
- 15) Potential impact on mission of ROE.
- 16) BDA plan.
- 17) Integration of joint fires with C2W and vice versa.

b. PSYOP officer briefs psychological warfare plan.

c. J6 briefs the EW plan to include air and surface electronic combat operations.

d. J3 Plans briefs the information warfare plan.

e. Subordinate commanders brief-back their understanding of the joint fires and fire support plan and pose questions and issues for refinement.

f. J3 Plans ensures that necessary information from the joint fires plan (e.g., JIPTL and FSCMs) is integrated into the JTF DST.

9. Plan Refinement.

- a. J3 Plans actively solicits components' comments and any recommended changes.
- b. J3 Plans presents components' comments and recommendations to the JTCCB. JTCCB provides advice to CJTF and guidance to J3.
- c. After components' input is received, the joint fires plan is refined and improved to accommodate component requirements and meet the CJTF's intent.
- d. Joint fires plan and target lists are modified and refined as new intelligence is received regarding enemy locations and capabilities, and as status of JTF elements and coalition capabilities changes.
- e. Plan is developed to provide sufficient redundancy to ensure that all HPTs can be attacked if primary acquisition or engagement means are unavailable or rendered unusable.
- f. Force protection measures are developed by J3 Plans for all key acquisition and engagement assets.
- g. JTF joint fires plan is updated and coordinated with latest deep battle plans. J3 Plans coordinates with the JTF Deep Operation Coordination Center (DOCC) to ensure the integration of organic, supporting, and joint fires in support of JSEAD and the attack of deep targets.
- h. Plans for attacks of high value/high-payoff targets are refined to ensure that targets are engaged by the appropriate fire support asset and that damage assessment is conducted as required.
- i. Hand off procedures from target detection means to attack systems are refined to engage TCTs.
- j. J3 Plans, assisted by the JFFC, ensures all fire plans, firing locations, and significant intensities of planned fires are provided to and coordinated with the ACA and the BCD.
- k. Plans for support of the rear battle are refined to include allocation of fire support assets to the tactical combat force (TCF).
- l. J3 Plans coordinates with Civil Affairs Staff Officer to update locations of refugees and noncombatants, built-up areas, and cultural/religious sites.

m. J3 Plans, assisted by the JFFC, ensures that changes and refinements to the plan are continuously disseminated to higher, lower, adjacent, and supporting commands.

n. J3 Plans provides input to CJTF for his messages to the country team, e.g., ambassador, and the unified commander, so that they are kept informed as the plan is refined.

10. Plan Updates.

a. J3 Plans provides periodic updates regarding modifications and refinements to the joint fire plan.

b. J3 Plans, assisted by JFFC, monitors the progress of joint fires preparations and reports/briefs the following, as required, for 72 hours out: *[NOTE: The JFCC closely coordinates with and attends briefings given by other members of the JTF staff whose area of interest would affect the joint fires plan (e.g., intelligence, logistics, personnel updates, information warfare, PSYOP, EW, legal [concerning ROE], and civil affairs).]*

- 1) Changes to targeting guidance, priorities, JIPTL.
- 2) Changes to artillery organization for combat.
- 3) Changes in available fires and modification of assigned missions.
- 4) Current location, status, and operations of all joint fires and target acquisition assets (to include SOF and armed helicopters).
- 5) Status of JFACC planning and targeting.
- 6) Changes to apportionments and allocations for CAS, AI, and counterair.
- 7) Refinements to JAAT plans and any changes to JSEAD requirements.
- 8) Changes to plans for the use of EW assets.
- 9) Use of fires in psychological and deception operations. *[NOTE: Use of fires in deception operations will usually be briefed in a separate session due to operational security (OPSEC) requirements.]*
- 10) Changes to FSCMs.

c. J3 Plans, assisted by the JFFC, informs CJTF, JTF staff, and components of changes.

11. Force Protection Operations and Activities.

- a. J3 Plans coordinates with J2 to ensure that information on enemy locations and capabilities including target acquisition and joint fires assets accurately reflects current situation.
- b. J3 Plans, assisted by the JFFC, coordinates with service components to ensure that joint fires and target acquisition assets have been provided adequate priority to assure survivability and force protection.
- c. J3 Plans establishes priority of fires for security forces.
- d. J3 Plans ensures target acquisition assets and delivery means are positioned to provide long range fires including non-lethal fires for the security force.
- e. J3 Plans presents to JTCB recommendations for apportionment of CAS and naval surface fires in support of the security forces.
- f. J3 Plans, assisted by the JFFC, integrates fires assets into the joint force deception plan.
- g. J3 Plans and C2W officer, assisted by the JFFC, integrate fires with C2W.
- h. OPSEC measures are developed and planned to avoid detection of the security force locations as well as those of JTF target acquisition and joint fires assets.
- i. J3 Plans, assisted by JFFC, coordinates with the JTF engineer to plan fire support coverage of operational obstacles.
- j. Required changes revealed by the JTF rehearsals (obtained from J3 Ops) are integrated into the joint fires and components' fire support plans.
- k. Additional input from higher, lower, or adjacent fire planners resulting from OPPLAN rehearsals is also incorporated into the joint fires plan.
- l. Potential movement or terrain management conflicts that were discovered during rehearsals are resolved.
- m. J3 Plans, assisted by the JFFC, disseminates all refinements and changes to joint fires plan to higher, lower, supporting, and adjacent fire planners.

12. Mission Preparation Phase.

- a. J3 Plans records results of JTCB meetings with any modifications requiring refinements to apportionment and the JIPTL provided by the JFACC.
- b. J3 Plans, assisted by JFFC, monitors the status of joint fires preparations.
 - 1) Status and preparation of component artillery and other fire support assets to support the joint fires plan.
 - 2) Availability of joint air and naval surface fires, electronic warfare assets, PSYOP capabilities, and armed helicopters to support the joint fires plan.
 - 3) Preparation and status of target acquisition units and assets.
 - 4) Changes to target lists based on updated intelligence.
 - 5) Engineer activities.
 - a) Barrier plans.
 - b) Maintenance/preparation of lines of communication (LOCs) and main supply routes (MSRs).
 - c) Preparation of alternate and supplementary firing locations.
 - d) Supplementary survivability measures for critical target acquisition assets.
 - e) Family of scatterable munitions (FASCAM) planning and preparation.
 - f) Preparation or improvement of facilities for use by joint fires elements.
 - 6) Changes of location of friendly forces, refugees, or other noncombatants.
 - 7) Weather updates.
- c. J3 Plans monitors component preparation:
 - 1) Ensures that the joint fires plan is refined to reflect changes to subordinate unit maneuver plans.
 - 2) Ensures that changes to subordinate unit fire support plans are integrated into the joint fires plan.
 - 3) Coordinates with components to adjust FSCMs as required to facilitate delivery of subordinate, adjacent, and joint fires.
 - 4) Appraises recommendations to LCC for shifts to the FSCL.
 - 5) Monitors availability of joint fires assets to support both tactical and operational fires.
 - 6) Monitors the status of joint air and NSF requests and availability of support.
 - 7) Monitors recommendations of the JTCB.
 - 8) Monitors availability of ammunition and spare joint fires major end items.
 - 9) Monitors JFACC preparation of the ATO.
 - 10) Ensures that locations of SOF and long range reconnaissance patrols (LRRPs) are known and that the joint fires plan is adjusted to avoid fratricide and to provide joint fire support as required for direct action missions or contingency operations.

d. JFFC facilitates sharing of information between J3 Plans and service and functional commanders. He recommends changes to JTF Decision Support Template (DST).

e. J3 Plans makes necessary changes to JTF DST; recommends changes to plan and FSCL to CJTF.

13. Integration of Joint Targeting.

a. J3 Plans obtains assistance from JFFC in planning and coordinating detailed fire support operations and joint fires. *[NOTE: Joint fires operations may involve the coordinated use of intelligence, artillery, NSF, surface-to-surface rocket and missile artillery, armed helicopters, USAF, USN, USMC, and/or SOF assets to engage the enemy.]*

b. J3 Plans, assisted by the JFFC, identifies requirements and nominates targets to the JFACC that are outside the component boundaries.

c. J3 Plans supports the joint target list development process by providing targets and targeting information to the unified command JIC and the JTF JFACC.

1) Unified command provides weaponeering support as required.

2) Targets identified by the unified command for JTF attack are provided to the JTF for execution.

d. J3 Plans obtains JFACC developed target lists and reviews them to ensure they support the concept of operations and meet CJTF's intent.

1) Target lists provide a description, precise location at time of desired attack, target composition, desired effects, and rationale for engagement. (Requests for close air support are concurrently submitted through the BCD to the air component AOC.)

2) JTCCB reviews target lists for consistency with CJTF intent for joint fires, inclusion of unified command and JTF targets, and component requirements.

3) After the CJTF receives a recommendation from the JTCCB and makes a decision regarding targeting and apportionment, the JFACC staff plans and executes the missions through the ATO.

e. J3 Plans, assisted by the JFFC, establishes maneuver control and fire support coordinating measures to facilitate component and joint operations.

f. J3 Plans, assisted by the JFFC, coordinates rear area joint fire support with the joint rear area coordinator (JRAC) and the commander of the TCF to include identification of restricted fire and NFAs.

14. Planning JTF Command Group and Command Posts Locations.

a. J3 Plans plans the locations of the JTF command group and command posts so they are positioned to support and control the battle.

b. The Joint Operations Center (JOC) serves as the JTF main command post and is centrally located to best control all JTF operations; normally operates under the control of the JTF Chief of Staff.

c. The JTF tactical operations center (JTOC) is located well forward where it can best control JTF units in contact; it normally operates under the control of the JTF J3.

d. The joint rear tactical operations center (JRTOC) is located in the joint rear area and is under control of the Joint Rear Area Commander (JRAC). Fires are coordinated by the tactical combat force (TCF) commander through the JRTOC with appropriate component and host nation combat commanders assigned to rear operations.

Self-Assessment Tools for J3 Plans Staff Section's Mini-AARs

1. Self-Assessment and Feedback.

a. One of the major challenges to assessing training performance and giving meaningful feedback in the joint arena is finding the right people with the right expertise to conduct the assessment. At lower echelons, those personnel can be found in like units or in higher echelon units and can be tasked to perform assessment and feedback for other units' training. But for a joint task force at the corps level, it is often times impractical to task like or higher units for personnel. Additionally, during actual combat or for training at times other than during a major joint exercise, expert observers/controllers/trainers will not be present to provide necessary feedback. So where does one find the required expertise? It can be found among the corps JTF's own staff personnel. Therefore, the training performance measures and feedback methods contained in this guide were designed for **self**-assessment by personnel in those JTF staff sections involved with joint fires operations.

b. Many of the tasks performed by the JTF staff in joint fires operations are process oriented, as opposed to outcome oriented. To perform the processes involves, to a large degree, the performance of military "art" based on collective judgment. This is something difficult to measure *objectively*. It was, therefore, necessary to derive mainly *subjective* performance measurement tools.

c. The Self-Assessment Tools are to be used by the chief of each key JTF staff section to conduct a 10-15 minute mini-AAR (after action review) for his section at the conclusion of each iteration or phase of its joint fires processes. This allows him to give and receive feedback on how well the process was performed and on what needs to be fixed or improved for the next iteration. The Self-Assessment Tools:

- 1) Provide a reminder and a format to conduct on-going, semi-structured reviews of what's being done, for what purpose, and how well it's being done.
- 2) Provide a record of performance progress throughout the duration of a training exercise or during actual combat.
- 3) Provide a record of lessons learned for inclusion into the overall JTF Joint Fires AAR.
- 4) Identify tasks which require additional training or need added emphasis in future training exercises.

d. The Self-Assessment Tools for the J3 Plans Staff Section are in the form of questions for the chief of the section to ask himself and the members of his section. They are arranged in general categories representing the sequence in which tasks are

performed. A mini-AAR should be performed at the conclusion of each of the following phases.

2. Establishment of Joint Task Force and Initial Planning. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

- a. How well was the staff section organized and how well did they work together?
- b. Have all relevant inputs from higher, adjacent, and lower headquarters been collected? Are they understandable and do they make operational sense? If not, has clarification been sought? From where?
- c. Did you derive specified and implied tasks from the unified command's OPOD? Did you identify the mission and joint operations area (JOA)?
- d. Did your initial planning:
 - 1) Determine the conditions required to meet the desired military end state provided by the unified commander?
 - 2) Determine campaign objectives and tasks required to accomplish them?
 - 3) Determine constraints and restrictions; e.g., rules of engagement, overflight restrictions, political considerations?
 - 4) Review assigned forces to determine adequacy of the force to perform the tasks necessary to accomplish the mission? Assess the proper mix of forces and deployment sequence of the JTF?
- e. Did you prepare briefing for J3 to present to CJTF and staff on mission and proposed planning timelines?
- f. Did you alert subordinate components, service and functional, and inform them of the mission?
- g. Did you prepare meeting of JTF joint planning group (JPG) for component and functional planners in order to begin parallel planning?
- h. Did you coordinate with J2 to ensure the following:
 - 1) That intelligence preparation of the battle space (IPB) was oriented on the JTF mission?
 - 2) That initial drafts of CCIR and EEI were prepared for JPG discussion?
 - 3) That the unified command Joint Intelligence Center (JIC) has been contacted for the following purposes:
 - a) Determination of availability of national and theater RSTA assets?

b) Update of intelligence database?

i. Did you obtain from the J4 information about the availability of ammunition and inter- and intra-theater transportation for ammunition and equipment?

j. Did you provide to the J4 an initial plan of what personnel will be in the JTF HQ advance element and what component forces will lead into the operational area? Has J4 to begun coordination with the unified command for deployment scheduling?

k. Did you initiates joint fires planning, and:

1) Did you recommend designation of Joint Force Air Component Commander (JFACC)?

2) Did you recommend designation of a senior officer to oversee joint fires functions and to facilitate the coordination of joint fires and fire support within the JTF HQ and with service and functional components? Was he provided the staffing necessary? Was he designated as the Joint Force Fires Coordinator (JFFC)?

3) Did you recommend designation of the Airspace Coordination Authority (ACA)?

4) Did you recommend designation of the Area Air Defense Commander (AADC)?

5) Did you establish and oversee the administration of the Joint Targeting Coordination Board (JTCCB)? Did you schedule an initial meeting to oversee JTF targeting functions and develop broad targeting guidance?

6) Did you ensure that liaison and communications were established between the component fire planners and from the components to the JTF HQ to facilitate joint fire planning?

7) Did you ensure that liaison and communications were established between the JTF HQ and coalition fire planners?

8) Did you obtain from the J2 and the JFFC the means of delivery for fires and the target acquisition assets available to the JTF from components and coalition members?

3. Operational Mission Analysis and CJTF's Initial Planning Guidance. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Were all specified and implied tasks required for mission accomplishment are identified?

b. Did you obtain information collected by J2 on threat forces order of battle, centers of gravity (and related high-payoff targets [HPTs]), and the nature and characteristics of the JOA and areas of interest?

c. Did you coordinate with J2, J3, and J6 and begin planning command and control warfare (C2W) operations (encompasses OPSEC, PSYOP, EW, deception, and physical destruction of enemy command and control [C2] nodes and other C2W targets)?

d. Did you obtain information collected by Civil Affairs Staff Officer concerning locations of refugees; noncombatants; significant historic, cultural and religious structures; and population centers which may restrict delivery of fires and require fire support coordination measures (FSCMs), e.g., no fire areas (NFAs) and restricted fire areas (RFAs)?

e. Did you obtain information from SJA on rules of engagement (ROE)?

f. Did you facilitate JTCC meeting and perform the following actions:

- 1) Based on the situation and understanding of the mission, draft targeting guidance and priorities for CJTF approval?
- 2) Based on input from the J2, identify high-value targets (HVTs) and prepares initial joint target lists (JTLs)?
- 3) Assess requirements for, and availability of, all target acquisition assets?
- 4) Identify requirements for and availability of fires means to include CAS, AI, NSF, EW, PSYOP, and armed helicopters (attack, other)?

g. Did you monitor the deployment of all forces? Did you monitor the components' positioning of assets to ensure that no gaps exist in supporting capabilities?

h. Did you provide input to the J4, so that he can work time-phased force deployment data (TPFDD) with the unified command? Were JFFC's recommendations for required delivery date of joint fires assets included in this input ?

i. Did you brief CJTF on your recommendation for CJTF Initial Planning Guidance?
Did the briefing include:

- 1) Restatement of mission based on operational mission analysis?
- 2) Initial statement of intent to include CJTF vision of tasks to be accomplished to achieve mission requirements, priorities for deployment and positioning of forces, and conditions to be achieved for the desired military end state?
- 3) Recommended CCIR and EEI?
- 4) Force protection measures?
- 5) Guidance for C2W operations?
- 6) Clear statement of intent for the use of fires and component fire support (to include priorities) and delineation of how these assets support the maneuver concept?
- 7) Timelines?

j. Did you prepare a message for CJTF to forward to unified commander outlining CJTF's concept of operations, near-, mid-, and long-term objectives; and requirements for theater level support? Did you include joint fires related input and coordinate with JTCCB, component commanders, and J2 to identify initial requirements for theater level targeting and weaponizing support; e. g., Tomahawk land attack missile (TLAM) support? Did you bring the JFACC into the planning of joint fires, so that you clearly understands his concept of operations to include apportionment recommendations and integrates it into operational planning and course of action (COA) development?

4. Developing and Issuing Warning Order. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you develop a clear warning order? Did you disseminated it to all subordinate and supporting units?

b. Did you obtain from the JFFC-E and provide the following information to the Joint Planning Group (JPG) and joint fires planners as a part of the JTF warning order?

- 1) Priorities of fires, including joint fires capability required to provide adequate lethality for early deployers?
- 2) Host nation/coalition fire support systems available in the JOA?
- 3) Requirements for positioning of target detection and joint fires assets?
- 4) Fire coordination facilities and mechanisms; e.g., JFACC, JTCCB, deep operations coordination cell (DOCC), battlefield coordination detachment (BCD), joint forces fires coordination element?
- 5) Permissive and restrictive fire control measures?

- 6) Special instructions on ROE, fire support communications, and logistic support?
- 7) Predicted impact of terrain and weather on fires?
- 8) Staging and marshaling areas for fires systems, to include those en route or proximate to the JOA?

5. Preparation of Mission Estimate to Include Development of Courses of Action.

Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

- a. Did you facilitate JTCCB meeting and ensure that:
 - 1) JTCCB assisted in development of estimate and COAs?
 - 2) JTCCB reviewed JFACC recommendations?
- b. Did you initiate estimate process based on restated mission, the CJTF's stated intent, and the factors of METT-T?
- c. After determining and identifying the availability of all target acquisition and delivery means, did you provide this data and a recommended deployment sequence and force mix to the JPG in order to assist in COA development?
- d. Did you ensure that the JPG considered all available fire support systems to include target acquisition assets when developing the joint fires estimate?
- e. Upon receipt of proposed COAs from JPG, did you obtain from the JFACC a fire plan for each COA which:
 - 1) Supported the CJTF's intent for fires?
 - 2) Provided required fires requested to support components' concept(s) of operations and scheme(s) of maneuver in accordance with the CJTF's priorities?
 - 3) Positioned target acquisition and delivery systems to support the concept of operations?
 - 4) Exploited enemy vulnerabilities and attacks centers of gravity and related high-payoff targets?
 - 5) Ensured coordination, synchronization, and integration of strategic, operational, and tactical fires means?
- f. Did you obtain JFACC recommendations for apportionment and joint integrated priority target list (JIPTL)?

g. Did you monitor JFFC's coordination with all concerned to ensure that the JTF components and coalition partners understand each other's concepts of operation(s), priorities for fires, and targeting priorities in order to facilitate coordination of fires and ensure unity of effort?

6. Analysis and Comparison of Courses of Action. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you supervise courses of action (COA) comparison process and pay particular attention to synchronization and integration of joint fires?

b. Did you have the JFFC-E presents a fire plan for each COA? Did it include:

- 1) Recommended targeting guidance and priorities developed by the JTCCB?
- 2) JFACC recommended air apportionment?
- 3) Changes in organization for combat and priorities in support of phased maneuver plans?
- 4) Permissive and restrictive fire support coordination measures?
- 5) Target-value analysis (TVA) of each COA? Were the following factors influencing the analysis included:
 - a) Impact on enemy operations and probable responses?
 - b) Criticality of target as it relates to the success of the friendly mission?
- 6) Initial high-payoff target list (HPTL)?
- 7) The best locations and times to attack HPTs, identified and expressed as TAIs?
- 8) Detection and attack means for HPTs, to include backup means?
- 9) Decision points (DPs) or decision timelines (recorded on the DST)?
- 10) Plans for expeditiously attacking both known and unknown time critical targets (TCTs)?
- 11) Positioning and repositioning of all target acquisition assets and delivery systems?
- 12) Plans for the integration of PSYOP and EW assets?
- 13) Plans to conduct C2W warfare, including EW against enemy command, control, communications, computers, and intelligence (C⁴I) assets and PSYOP against personnel?
- 14) Options for the use of CAS, AI, and NSF?
- 15) Allocation of ground-based fires' assets to support the concept of operations?
- 16) Integration of movement and displacement of fires assets and units to follow the battle flow?
- 17) Linkage of BDA assets to the attack of HPTs?

c. Did you compare COAs? Did you rate of each course of action in terms of the ability of available joint fires assets to support the CJTF intent?

d. Were additional HPTs are developed from the COA comparison process? Were they added to the JTL?

e. Was the selected course of action the one most supportable from a joint fires perspective? Have components been informed?

f. Did you brief JTCCB on the recommended COA and facilitate a meeting to ensure JTCCB reviewed JFACC recommendations for apportionment for:

- 1) Compliance with CJTF intent?
- 2) Support of components' concepts of operations?

g. Did you prepare briefing by J3 to CJTF on recommended COA? Did the briefing include:

- 1) Description of each COA and including joint fires priorities (RSTA assets, AI, CAS, NSF, artillery, EW, PSYOP, deception operations), apportionment, and desired effects?
- 2) Rationale for selecting recommended COA?
- 3) Request for CJTF approval of recommended COA?

h. Did you makes any modification to the COA directed by CJTF and ensure that the following occurred:

- 1) Unified commander was informed of CJTF's decision?
- 2) Supporting and subordinate fire support commanders were notified regarding CJTF's decision?
- 3) Joint fires plans were adjusted by the JFACC and components to comply with the CJTF's guidance?

7. Preparation of JTF OPORD/FRAGO. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you ensure JFFC-E finalized the joint fires plan, based on component input and coordination, to include preparation of paragraph 3a(2) Fires and the joint fires annex, complete with the JIPTL, protected targets list, joint fires execution matrix, and overlays?

b. Did you obtain JIPTL from the JFACC for validation by the JTCB and approval by the CJTF?

c. Did you ensure that paragraph 3a(2) Fires included the following:

- 1) Outline of joint fires plan, synchronization, and integration measures to support each phase of the battle?
- 2) Information relevant to apportionment?
- 3) Designation of components which have priority of joint fire support by phase?
- 4) Designation of priority of use of low-density munitions?
- 5) Description of times, duration, and desired effects of supporting fires? Was attack guidance provided to attack system managers via the attack guidance matrix (AGM)? Did the AGM consist of target categories, specific HPTs, known TCTs, times when targets should be attacked, how they should be attacked, and any attack restrictions?
- 6) Establishment of priority for requested joint air and naval surface fires?

d. Did you ensure that the joint fires appendix of Annex C - Operations, with accompanying appendices, target list matrices, and overlays, reflects:

- 1) Enemy fire support capabilities including artillery, missiles and rockets, air defense, attack helicopters, tactical air, EW, naval surface fires, and NBC capabilities, as well as target acquisition capabilities?
- 2) Information regarding friendly forces mission and concept of fires, to include joint air and naval forces?
- 3) All fire support resources assigned, attached, and supporting the JTF?
- 4) Joint fires organization for combat, joint fires priorities, and concept for support; apportionment of joint fires?
- 5) Positioning and use of all target acquisition assets and delivery systems? A sensor/attack matrix may be used in order to ensure that all HPTs are acquirable and that a delivery system is available to attack the target?
- 6) JIPTL?
- 7) Instructions for attack of HPTs and time critical targets (TCTs)?
- 8) Concept for use of air support (Air Force, naval air, USMC air, and armed helicopters)?
- 9) Concept for field artillery support?
- 10) Concept for naval support:
 - a) NSF?
 - b) Allocation of ANGLICOs?
- 11) Plans for offensive EW, PSYOP, and other non-lethal means of fires?
- 12) Permissive and restrictive FSCMs?
- 13) Airspace control?
- 14) ROE?
- 15) Rear battle to include allocation of joint fires to the tactical combat force (TCF)?

16) Deception plan?

e. Have you ensured that joint fires and joint fires considerations are integrated into body and appropriate annexes of the OPOD/FRAGO?

- 1) Task organization?
- 2) Intelligence: Appendix 4 - Targeting?
- 3) Operations:
 - a) Appendix 3 - C2W?
 - b) Appendix 4 - PSYOP?
 - c) Appendix 7 - ROE?
 - d) Appendix 9 - Reconnaissance?
 - e) Appendix 10 - Counter C3?
 - f) Appendix 15 - Counterattack?
 - g) Appendix 17 - Amphibious operations?
 - h) Appendix - Joint fire support?
 - i) Appendix - Synchronization matrix?
 - j) Appendix - Forcible entry operations?
 - k) Appendix 19 - Airspace control plan (ACP)?
- 4) Logistics: Appendix 6 - Non-nuclear ammunition?
- 5) Civil affairs?
- 6) Command relationships?
- 7) C3 systems?
- 8) Space operations?
- 9) Force protection?
- 10) Execution checklist?

f. Did you coordinate with the J2 to ensure that the JTF collection plan satisfies BDA requirements?

g. Did you coordinate with service and functional commands to share information and facilitate parallel planning?

8. OPOD/FRAGO Approval. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you brief the joint fires plan? Did it include:

- 1) Joint fires organization for combat?

- 2) Concept for joint fires within the JOA and joint fire support to component operations?
- 3) Priorities of fires during all phases?
- 4) Apportionment?
- 5) JIPTL?
- 6) All fire control and coordination measures?
- 7) Location, status, and mission of target acquisition and delivery assets?
- 8) Timing of fires?
- 9) Detection and attack of HPTs and TCTs?
- 10) Use of preparatory and counter fires?
- 11) NSF plan?
- 12) Available resources and apportionment to air interdiction and close air support and a description of the component commanders' intents for the use of each?
- 13) Plans for joint air attack (JAAT)?
- 14) Essential airspace control measures?
- 15) Potential impact on mission of ROE?
- 16) BDA plan?
- 17) Integration of joint fires with C2W and vice versa?

b. Did you ensure that the PSYOP officer briefed psychological warfare plan?

c. Did you ensure that the J6 briefed the EW plan to include air and surface electronic combat operations?

d. Did you brief the information warfare plan?

e. Did you coordinate subordinate commanders brief-backs of their understanding of the joint fires and fire support plan? Did you solicit questions and issues for plan refinement?

f. Did you ensure that necessary information from the joint fires plan (e.g., JIPTL and FSCMs) was integrated into the JTF DST?

9. Plan Refinement. Questions to ask yourself and your staff section members:

[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]

a. Did you actively solicit components' comments and any recommended changes?

b. Did you present components' comments and recommendations to the JTCCB? Did you ensure that any advice and guidance provided by the JTCCB was submitted to J3 and CJTF for decision?

c. Did you ensure that the joint fires plan was refined and improved to accommodate component requirements and meet the CJTF's intent?

d. Did you ensure that joint fires plan and target lists were modified and refined as new intelligence was received regarding enemy locations and capabilities, and as status of JTF elements and coalition capabilities changed?

e. Was a plan developed to provide sufficient redundancy and to ensure that all HPTs can be attacked if primary acquisition or engagement means are unavailable or rendered unusable?

f. Did you develop force protection measures for all key acquisition and engagement assets?

g. Did you ensure that the JTF joint fires plan was updated and coordinated with latest deep battle plans? Did you coordinate with or ensure that the JFFC-E coordinated with the JTF Deep Operation Coordination Center (DOCC) to ensure the integration of organic, supporting, and joint fires in support of JSEAD and the attack of deep targets?

h. Did you ensure that plans for attacks of high value/high-payoff targets were refined to ensure that targets are engaged by the appropriate fire support asset and that damage assessment is conducted as required?

i. Did you ensure that hand-off procedures from target detection means to attack systems were refined to engage TCTs?

j. Did you check with the JFFC-E to ensure all fire plans, firing locations, and significant intensities of planned fires were provided to and coordinated with the ACA and the BCD?

k. Were plans for support of the rear battle refined to include allocation of fire support assets to the tactical combat force (TCF)?

l. Did you coordinate with Civil Affairs Staff Officer to update locations of refugees and noncombatants, built-up areas, and cultural/religious sites?

m. Did you ensure that changes and refinements to the plan were continuously disseminated to higher, lower, adjacent, and supporting commands?

n. Did you provide input to CJTF for his messages to the country team, e.g., ambassador, and the unified commander, so that they were kept informed as the plan was refined?

10. Plan Updates. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you provide periodic updates regarding modifications and refinements to the joint fire plan?

b. Did you ensure the JFFC-E monitored the progress of joint fires preparations and reported/briefed the following, as required, for 72 hours out:

- 1) Changes to targeting guidance, priorities, JIPTL?
- 2) Changes to artillery organization for combat?
- 3) Changes in available fires and modification of assigned missions?
- 4) Current location, status, and operations of all joint fires and target acquisition assets (to include SOF and armed helicopters)?
- 5) Status of JFACC planning and targeting?
- 6) Changes to apportionments and allocations for CAS, AI, and counterair?
- 7) Refinements to JAAT plans and any changes to JSEAD requirements?
- 8) Changes to plans for the use of EW assets?
- 9) Use of fires in psychological and deception operations?
- 10) Changes to FSCMs?

c. Did you inform CJTF, JTF staff, and components of changes?

11. Force Protection Operations and Activities. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you coordinate with J2 to ensure that information on enemy locations and capabilities including target acquisition and joint fires assets accurately reflects current situation?

b. Did you coordinate with service components to ensure that joint fires and target acquisition assets have been provided adequate priority to assure survivability and force protection?

c. Did you establish priority of fires for security forces?

d. Did you ensure target acquisition assets and delivery means are positioned to provide long range fires including non-lethal fires for the security force?

e. Did you present to JTCB recommendations for apportionment of CAS and naval surface fires in support of the security forces?

f. Did you integrate fires assets into the joint force deception plan?

g. Did you, the C2W officer, and the JFFC, integrate fires with C2W?

h. Did you develop and plan OPSEC measures to avoid detection of the security force locations as well as those of JTF target acquisition and joint fires assets?

i. Did you coordinate with the JTF engineer to plan fire support coverage of operational obstacles?

j. Were required changes revealed by the JTF rehearsals (obtained from J3 Ops) integrated into the joint fires and components' fire support plans?

k. Was additional input from higher, lower, or adjacent fire planners resulting from OPPLAN rehearsals also incorporated into the joint fires plan?

l. Were potential movement or terrain management conflicts discovered during rehearsals resolved?

m. Did you disseminate all refinements and changes to joint fires plan to higher, lower, supporting, and adjacent fire planners?

12. Mission Preparation Phase. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you record results of JTCB meetings with any modifications requiring refinements to apportionment and the JIPTL provided by the JFACC?

b. Did you monitor the status of joint fires preparations?

1) Status and preparation of component artillery and other fire support assets to support the joint fires plan?

2) Availability of joint air and naval surface fires, electronic warfare assets, PSYOP capabilities, and armed helicopters to support the joint fires plan?

3) Preparation and status of target acquisition units and assets?

4) Changes to target lists based on updated intelligence?

5) Engineer activities:

a) Barrier plans?

b) Maintenance/preparation of lines of communication (LOCs) and main supply routes (MSRs)?

- c) Preparation of alternate and supplementary firing locations?
- d) Supplementary survivability measures for critical target acquisition assets?
- e) Family of scatterable munitions (FASCAM) planning and preparation?
- f) Preparation or improvement of facilities for use by joint fires elements?
- 6) Changes of location of friendly forces, refugees, or other noncombatants?
- 7) Weather updates?

c. Did you monitor component preparation to:

- 1) Ensure that the joint fires plan was refined to reflect changes to subordinate unit maneuver plans?
- 2) Ensure that changes to subordinate unit fire support plans were integrated into the joint fires plan?
- 3) Coordinate with components to adjust FSCMs as required to facilitate delivery of subordinate, adjacent, and joint fires?
- 4) Appraise LCC of recommendations for shifts to the FSCL?
- 5) Monitor availability of joint fires assets to support both tactical and operational fires?
- 6) Monitor the status of joint air and NSF requests and availability of support?
- 7) Monitor recommendations of the JTCCB?
- 8) Monitor availability of ammunition and spare joint fires major end items?
- 9) Monitor JFACC preparation of the ATO?
- 10) Ensure that locations of SOF and long range reconnaissance patrols (LRRPs) are known and that the joint fires plan was adjusted to avoid fratricide and to provide joint fire support as required for direct action missions or contingency operations?

d. Were changes recommended by the JFFC-E to the JTF Decision Support Template (DST) incorporated?

e. Did you brief recommended changes to plan and FSCL to the CJTF for his approval?

13. Integration of Joint Targeting. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

- a. Did you obtain assistance from JFFC in planning and coordinating detailed fire support operations and joint fires?
- b. Did you check to ensure the JFFC identified requirements and nominated targets to the JFACC that were outside the component boundaries?
- c. Did you support the joint target list development process by providing targets and targeting information to the unified command JIC and the JTF JFACC? Were targets identified by the unified command for JTF provided to the JTF for execution?
- d. Did you obtain JFACC developed target lists and review them to ensure they support the concept of operations and meet CJTF's intent? Did you check to ensure:
 - 1) Target lists provided a description, precise location at time of desired attack, target composition, desired effects, and rationale for engagement?
 - 2) JTCB reviewed target lists for consistency with CJTF intent for joint fires, inclusion of unified command and JTF targets, and component requirements?
 - 3) CJTF received JTCB recommendations and made a decision regarding targeting and apportionment? That the JFACC staff planned the missions through the ATO?
- e. Did you ensure the JFFC-E established maneuver control and fire support coordinating measures to facilitate component and joint operations?
- f. Did you coordinate rear area joint fire support with the joint rear area coordinator (JRAC) and the commander of the TCF to include identification of restricted fire and NFAs?

14. Planning JTF Command Group and Command Posts Locations. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

- a. Did you plan the locations of the JTF command group and command posts so they are positioned to support and control the battle?
- b. Have fires been coordinated by the tactical combat force (TCF) commander through the JRTOC with appropriate component and host nation combat commanders assigned to rear operations?

15. Consolidation and Reorganization. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you obtain reports on status of all joint fires assets to include target acquisition, air, naval surface fires, EW, PSYOP, and field artillery assets to ensure you had a correct appraisal of forces available for future operations?

b. Did you conduct an internal after action review (AAR) of joint fires operations and participate in JTF and component AARs?

c. Did you provide appropriate input for CJTF's conduct of joint fires operations AAR? [See Appendix E (Self-Assessment Tools for Overall JTF Joint Fires AAR).]

d. Have you checked with unified command J3 on any planning efforts for projected future operations or requirements?

APPENDIX B
J3 Operations Staff Section
Joint Fires Responsibilities

1. **Purpose.** This appendix identifies, organizes, and lists in logical sequence all of the J3 Operations Staff Section (J3 Ops) tasks necessary to perform its joint fires responsibilities.

2. **Force Protection Operations and Activities.**

a. J3 Ops coordinates with J2 to ensure that information on enemy locations and capabilities including target acquisition and joint fires assets is constantly updated to accurately reflect the current situation.

b. J3 Ops, assisted by the JFFC, coordinates with service components to ensure that joint fires and target acquisition assets are being provided adequate priority to assure survivability and force protection.

c. J3 Ops shifts priority of fires for security forces when necessary.

d. J3 Ops ensures target acquisition assets and delivery means are positioned to provide long range fires including non-lethal fires for the security force.

e. When necessary, J3 Ops, assisted by the JFFC, contacts JFACC's Air Operations Center (AOC) to direct that CAS and naval surface fire assets be made available to support security forces.

f. J3 Ops and C2W officer, assisted by the JFFC, integrate fires with C2W.

g. OPSEC measures are executed to avoid detection of the security force locations as well as those of JTF target acquisition and joint fires assets.

h. J3 Ops, assisted by JFFC, coordinates with the JTF engineer to ensure that planned fire support coverage of operational obstacles is executed.

i. Airspace control center is continually updated on location, direction, and trajectory of surface fires.

j. OPSEC measures are employed to avoid detection of the security force locations as well as those of JTF target acquisition and joint fires assets.

k. JTF employs risk assessment techniques and enforces safety procedures to eliminate noncombat losses of fire support equipment and personnel.

l. J3 Ops, assisted by the JFFC and SJA, coordinate with the unified command HQ for modifications to ROE. JFFC assists in dissemination of the modifications to all supporting and supported units after approval by the unified commander.

m. J3 Ops provides J3 Plans with changes to ROE. (J3 Plans presents them to JTCCB for its review.)

3. Mission Preparation Phase.

a. J3 Ops obtains from J3 Plans results of JTCCB meetings with any modifications requiring refinements to apportionment and the JIPTL provided by the JFACC.

b. J3 Ops, assisted by JFFC, monitors the status of joint fires preparations.

- 1) Status and preparation of component artillery and other fire support assets to support the joint fires plan.
- 2) Availability of joint air and naval surface fires, electronic warfare assets, PSYOP capabilities, and armed helicopters to support the joint fires plan.
- 3) Preparation and status of target acquisition units and assets.
- 4) Changes to target lists based on updated intelligence.
- 5) Engineer activities.
 - a) Barrier plans.
 - b) Maintenance/preparation of lines of communication (LOCs) and main supply routes (MSRs).
 - c) Preparation of alternate and supplementary firing locations.
 - d) Supplementary survivability measures for critical target acquisition assets.
 - e) Family of scatterable munitions (FASCAM) planning and preparation.
 - f) Preparation or improvement of facilities for use by joint fires elements.
- 6) Changes of location of friendly forces, refugees, or other noncombatants.
- 7) Weather updates.

c. J3 Ops monitors component preparation:

- 1) Ensures that the joint fires plan is refined to reflect changes to subordinate unit maneuver plans.
- 2) Ensures that changes to subordinate unit fire support plans are integrated into the joint fires plan.
- 3) Coordinates with components to adjust FSCMs as required to facilitate delivery of subordinate, adjacent, and joint fires.
- 4) Appraises recommendations to LCC for shifts to the FSCL.

- 5) Monitors availability of joint fires assets to support both tactical and operational fires.
- 6) Monitors the status of joint air and NSF requests and availability of support.
- 7) Monitors recommendations of the JTCCB.
- 8) Monitors availability of ammunition and spare joint fires major end items.
- 9) Monitors JFACC preparation of the ATO.
- 10) Ensures that joint fires aspects of CCIR are current.
- 11) Ensures that locations of SOF and long range reconnaissance patrols (LRRPs) are known and that the joint fires plan is adjusted to avoid fratricide and to provide joint fire support as required for direct action missions or contingency operations.

d. JFFC facilitates sharing of information between J3 Ops and service and functional commanders. He recommends changes to JTF Decision Support Template (DST).

e. J3 Ops obtains from J3 Plans any changes to JTF DST.

4. Joint Targeting and Fire Execution Integration.

a. J3 Ops obtains assistance from JFFC in reviewing and coordinating detailed fire support operations and joint fires. *[NOTE: Joint fires operations may involve the coordinated use of intelligence, artillery, NSF, surface-to-surface rocket and missile artillery, armed helicopters, USAF, USN, USMC, and/or SOF assets to engage the enemy.]*

b. J3 Ops, assisted by the JFFC, recommends necessary changes to maneuver control and fire support coordinating measures to facilitate component and joint operations.

c. J3 Ops, assisted by the JFFC, coordinates rear area joint fire support with the joint rear area coordinator (JRAC) and the commander of the Tactical Combat Force (TCF) to include identification of restricted fire and NFAs.

5. Rehearsal of Operations. *[NOTE: Rehearsals are always conducted, but can range from a full rehearsal to a terrain model, map, or radio back-briefs. At the JTF or land component level, most rehearsals will be in the form of brief backs and will be more general than rehearsals at tactical unit level.]*

a. J3 Ops conducts rehearsal of the operations plan. Joint fires and fire support plans are rehearsed concurrently with the operations plan in order to ensure appropriate synchronization. Includes CAS, NSF, armed helicopters' fire support, PSYOP, and EW. *[NOTE: Detailed rehearsal of JAAT and JSEAD is necessary; rehearsals should be accomplished by components with appropriate representation by all participants.]*

- b. Rehearsals address strategic, operational, and tactical fires.
- c. Rehearsals cover acquisition, observation, timing, attack, and BDA of HPTs. Backup systems should participate in the rehearsals. Rehearsals must include hand-off procedures from acquisition assets to attack systems to engage TCTs.
- d. Rehearsals include the positioning and displacement plan for all joint fires and target acquisition assets.
- e. Rehearsals include all aspects of collecting information to enable BDA.
- f. Rehearsals incorporate measures to prevent fratricide, non-essential collateral damage, and noncombatant casualties; measures include FSCMs, ROE, ACP, and IFF procedures.
- g. Land component's rehearsals include clearance procedures to facilitate firing across boundaries.
- h. Logistics rehearsals include ground and air movement, resupply procedures, and time schedules.
- i. Communication plan rehearsals include communications links between detection systems, the decision maker and delivery systems, as well as positioning and utilization of retransmission sites.
- j. Procedures to update the HPTL and synchronize the AGM and DST as the situation changes are rehearsed.
- k. Required changes revealed by the JTF rehearsals are passed to J3 Plans for integration into the joint fires and components' fire support plans.

6. Coordination with Higher, Adjacent, Supported, and Supporting Elements.

- a. J3 Ops, assisted by the JFFC, ensures that component liaison officers are knowledgeable and current on all aspects of the joint fires plan. Liaison officers from other headquarters are updated.
- b. J3 Ops, assisted by the JFFC, ensures coordination of procedures and targets to reinforce fires across boundaries when required.
- c. J3 Ops receives debriefs on joint fires and component fire support from JTF liaison officers located at component HQs or after their visits to other headquarters.
- d. J3 Ops provides continuous updates for the CJTF and other members of the staff regarding joint fires.

e. J3 Ops disseminates shifts to the FSCL location as it is moved.

f. J3 Ops ensures key aspects of the joint fires plan and requirements for theater level joint fires and RSTA assets are included in update briefings to the unified command.

7. Battlefield Visualization.

a. One of J3 Ops main functions is to provide the information necessary for CJTF to "visualize" the battlefield and for other staff sections to keep abreast of the current situation. CJTF will personally observe execution of critical aspects of the operation and will receive direct situation reports from component commanders. However, he must be able to come into the J3 Ops area at any time and receive the most accurate operational information available. *[NOTE: After considering the factors of METT-T, the CJTF adjusts his position on the battlefield to best control and influence fires as well as maneuver and other operations.]*

b. J3 Ops ensures that the J2:

- 1) Coordinates targeting and damage assessment requirements and locations of RSTA assets with components to ensure unity of effort and synchronization of RSTA operations with fires.
- 2) Provides and constantly updates information to the CJTF regarding the military aspects of the terrain as it relates to joint fires; e.g., elevation, soil density, vegetation, and masking.
- 3) Provides latest information regarding potential targets of opportunity, as well as enemy vulnerabilities to indirect fires, air-delivered munitions. This will include the status and location of enemy fire support assets and their vulnerability to counter fires.
- 4) Develops BDA and recommends re-targeting as appropriate.

c. J3 Ops presents any JFACC recommended changes to apportionment and the JIPTL.

d. J3 Ops continually updates and provides the CJTF with the location, disposition, status, and capability of all JTF joint fires assets and the effectiveness of the joint fires plan.

e. J3 Ops, assisted by the JFFC and J2, continually provides updates to the CJTF regarding the location, status, and disposition of target acquisition assets and recommend changes as appropriate.

f. J3 Ops reports to CJTF any changes to apportionment and JIPTL recommended by the JTCB.

g. The CJTF changes or provides additional CCIR to the J3 Ops who disseminates requirements to other JTF staff members and components as the battle progresses.

8. Current Battle Activities.

a. Based on what he sees and the information provided to him, CJTF makes appropriate decisions in response to changes in METT-T.

b. The J3 Ops, assisted by the JFFC:

- 1) Provides responses for new CCIRs related to fires.
- 2) Monitors employment of joint fires IAW the JIPTL and DST.
- 3) Anticipates other joint fires requirements as changes occur on the battlefield by:
 - a) Understanding the respective commanders' intents.
 - b) Remaining knowledgeable regarding battlefield events and the flow of the battle.
 - c) Following and war gaming the JTF battle through the use of templates.
 - d) Continuing the IPB process in coordination with the JTF J2.

c. J3 Ops, assisted by the J2 and C2W officer, develops combat assessments (CA) with reattack recommendations. JTCCB considers BDA and CA; recommends targeting action or change in targeting action or allocation.

d. In the event that the joint fires do not achieve CJTF's intent due to unanticipated enemy actions or other battlefield events, J3 Ops, assisted by the JFFC, conducts accelerated fire planning in coordination with the service and functional component staffs.

- 1) Accelerated fire support planning is based on updated IPB and changes to the JTF OPLAN.
- 2) New targets are identified and incorporated into the JIPTL in order to match targets to available weapons systems. Joint/multinational operational firepower resources are reallocated as necessary.

e. The LCC changes the location of the FSCL. If other components disagree with the FSCL location and the issue is not resolved by the JTCB, J3 Ops briefs CJTF for his resolution of the issue.

9. Tracking and Supporting the Battle.

a. J3 Ops, assisted by the JFFC, coordinates among the J3 Ops sections at JOC, JTOC, and JRTOC to synchronize the targeting effort as it is being executed:

- 1) Executes planned fires IAW the JTF plan and the DST.
- 2) Continually coordinates with the JTF staff to ensure that fires adequately support the concept of operations.
- 3) Evaluates fire requests in light of other requirements and joint fires resources available. Provides, denies, or substitutes other joint fires means within the scope of the delegated authority.
- 4) Coordinates attack of targets of opportunity obtained by JTF and supporting target acquisition assets; e.g., UAV, LRSU, sensors, radars, JSTARS, and SOF with the appropriate components.
- 5) Monitors and coordinates execution of AI with the JFACC.
- 6) Processes and coordinates JSEAD and JAAT missions.
- 7) Monitors immediate CAS and NSF requests.
- 8) Ensures that the Airspace Coordination Authority (ACA) is kept current on joint fires and fire support operations.
- 9) Monitors the availability and employment of special munitions; e.g., FASCAM, Search and Destroy Armor Munitions (SADARM), smoke, and illumination as outlined in the joint fires plan.

b. J3 Ops, assisted by the JFFC, ensures that fires are synchronized and integrated with JTF OPLAN by:

- 1) Performing target analyses.
- 2) Coordinating with subordinate fire support cells to integrate fires with maneuver.
- 3) Coordinating with JTF staff to ensure that CAS, AI, and NSF are integrated into the battle and synchronized with artillery fires, EW, and SOF and armed helicopter operations.
- 4) Coordinating the timing and duration of offensive EW (e.g., jamming) to support JTF maneuver and attacks by lethal systems.

c. J3 Ops and JFFC continue to track the battle flow through:

- 1) Spot reports and situation reports.
- 2) Interstaff coordination.
- 3) Monitoring communications channels.

- 4) BDA.
- 5) CA.

10. Battlefield Updates (METT-T Based).

a. J3 Ops provides updates on the status of land component field artillery, EW, and target acquisition assets.

b. J3 Ops ensures that JFACC representative, NGLO, and other representatives from the components provide updates regarding status of CAS, AI, and other air assets, and status and availability of NSF and SOF.

c. Updates include:

- 1) CA of previously executed fires.
- 2) Recommendations for re-targeting and re-apportionment of joint fires assets.
- 3) Planned movement of target acquisition and delivery assets with assessment of consequences in terms of availability of fires.
- 4) Types and quantity of munitions available with assessment of consequences in terms of availability of fires.

11. Supporting CJTF Decision Making Process on Operational Actions/Direction Under Time Constraints.

a. The CJTF directs re-targeting, re-apportionment of joint fires assets, or changes to JTF target list based on his own appreciation of the situation, CA, and recommendations from J3, JFACC, component commanders, and the JTCCB.

b. Understanding the CJTF's intent, J3 Ops immediately notifies him concerning events which indicate the joint fires plan execution is not occurring as envisioned and recommends and/or takes corrective actions.

c. J3 Ops reviews and modifies the joint fires plan and DST to keep pace with the JTF ongoing battle, to support unplanned battlefield events, and to incorporate CJTF decisions.

d. J3 Ops ensures that JFACC is informed of all changes so that he can modify JIPTL to incorporate CJTF decisions.

e. The CJTF's decisions regarding changes to the fires plan are captured by J3 Ops and are disseminated to component commands. An update is also provided to the unified command HQ on a periodic basis. JFCC assists.

12. Consolidation and Reorganization.

a. J3 Ops obtains reports on status of all joint fires assets to include target acquisition, air, naval surface fires, EW, PSYOP, and field artillery assets.

- 1) Reports status of assets through the J3 to the unified command HQ.
- 2) Monitors and assists efforts to fix, replace, resupply, and cross level battlefield joint fires losses.

b. J3 Ops monitors component fire and target acquisition asset reorganization and redistribution.

c. Fires are reprioritized to support consolidation.

d. J3 Ops conducts internal after action review (AAR) of joint fires operations and participates in JTF and component AARs.

e. CJTF conducts AAR of joint fires operations.

f. JTF staff begins planning for projected future operations or requirements.

[NOTE: Future operations could include transition to another command, continuation of combat, commencement of peacekeeping, humanitarian assistance, or redeployment, and disestablishment of the JTF depending on the situation and guidance from the unified commander.]

Self-Assessment Tools for J3 Ops Staff Section's Mini-AARs

1. Self-Assessment and Feedback.

a. One of the major challenges to assessing training performance and giving meaningful feedback in the joint arena is finding the right people with the right expertise to conduct the assessment. At lower echelons, those personnel can be found in like units or in higher echelon units and can be tasked to perform assessment and feedback for other units' training. But for a joint task force at the corps level, it is often times impractical to task like or higher units for personnel. Additionally, during actual combat or for training at times other than during a major joint exercise, expert observers/controllers/trainers will not be present to provide necessary feedback. So where does one find the required expertise? It can be found among the corps JTF's own staff personnel. Therefore, the training performance measures and feedback methods contained in this guide were designed for **self**-assessment by personnel in those JTF staff sections involved with joint fires operations.

b. Many of the tasks performed by the JTF staff in joint fires operations are process oriented, as opposed to outcome oriented. To perform the processes involves, to a large degree, the performance of military "art" based on collective judgment. This is something difficult to measure *objectively*. It was, therefore, necessary to derive mainly *subjective* performance measurement tools.

c. The Self-Assessment Tools are to be used by the chief of each key JTF staff section to conduct a 10-15 minute mini-AAR (after action review) for his section at the conclusion of each iteration or phase of its joint fires processes. This allows him to give and receive feedback on how well the process was performed and on what needs to be fixed or improved for the next iteration. The Self-Assessment Tools:

- 1) Provide a reminder and a format to conduct on-going, semi-structured reviews of what's being done, for what purpose, and how well it's being done.
- 2) Provide a record of performance progress throughout the duration of a training exercise or during actual combat.
- 3) Provide a record of lessons learned for inclusion into the overall JTF Joint Fires AAR.
- 4) Identify tasks which require additional training or need added emphasis in future training exercises.

d. The Self-Assessment Tools for the J3 Ops Staff Section are in the form of questions for the chief of the section to ask himself and the members of his section. They are arranged in general categories representing the sequence in which tasks are

performed. A mini-AAR should be performed at the conclusion of each of the following phases.

2. Force Protection Operations and Activities. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

- a. How well was the staff section organized and how well did they work together?
- b. Have all relevant inputs from J3 Plans, J2, JFFC-E, and from higher, adjacent, and lower headquarters been collected? Are they understandable and do they make operational sense? If not, has clarification been sought? From where?
- c. Did you coordinate with J2 to ensure that information on enemy locations and capabilities including target acquisition and joint fires assets was constantly updated to accurately reflect the current situation?
- d. Did you coordinate with service components to ensure that joint fires and target acquisition assets were being provided adequate priority to assure survivability and force protection?
- e. Did you shift priority of fires for security forces when necessary?
- f. Did you ensure target acquisition assets and delivery means were positioned to provide long range fires including non-lethal fires for the security force?
- g. Did you, when required, contact JFACC's Air Operations Center (AOC) to direct that CAS and naval surface fire assets be made available to support security forces?
- h. Did you coordinate with C2W officer and JFFC to integrate fires with C2W?
- i. Were OPSEC measures executed to avoid detection of the security force locations as well as those of JTF target acquisition and joint fires assets?
- j. Did you coordinate with the JTF engineer to ensure that planned fire support coverage of operational obstacles is executed?
- k. Was airspace control center continually updated on location, direction, and trajectory of surface fires?
- l. Were OPSEC measures employed to avoid detection of the security force locations as well as those of JTF target acquisition and joint fires assets?
- m. Did you monitor the employment of JTF risk assessment techniques, and did you enforce safety procedures when necessary to eliminate noncombat losses of fire support equipment and personnel?

n. Did you coordinate with the SJA and unified command HQ for modifications to ROE? Were modifications disseminated to all supporting and supported units after approval by the unified commander?

o. Did you provide J3 Plans with changes to ROE? (J3 Plans presents them to JTCB for its review.)

3. Mission Preparation Phase. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you obtain from J3 Plans results of JTCB meetings with any modifications requiring refinements to apportionment and the JIPTL? Did you ensure they were provided to the JFACC?

b. Did you check with JFFC-E on the status of joint fires preparations?

- 1) Status and preparation of component artillery and other fire support assets to support the joint fires plan?
- 2) Availability of joint air and naval surface fires, electronic warfare assets, PSYOP capabilities, and armed helicopters to support the joint fires plan?
- 3) Preparation and status of target acquisition units and assets?
- 4) Changes to target lists based on updated intelligence?
- 5) Engineer activities:
 - a) Barrier plans?
 - b) Maintenance/preparation of lines of communication (LOCs) and main supply routes (MSRs)?
 - c) Preparation of alternate and supplementary firing locations?
 - d) Supplementary survivability measures for critical target acquisition assets?
 - e) Family of scatterable munitions (FASCAM) planning and preparation?
 - f) Preparation or improvement of facilities for use by joint fires elements?
- 6) Changes of location of friendly forces, refugees, or other noncombatants?
- 7) Weather updates?

c. Did you monitor component preparation and:

- 1) Ensure that the joint fires plan was refined to reflect changes to subordinate unit maneuver plans?
- 2) Ensure that changes to subordinate unit fire support plans were integrated into the joint fires plan?
- 3) Coordinate with components to adjust FSCMs as required to facilitate delivery of subordinate, adjacent, and joint fires?
- 4) Appraise LCC of recommendations to shift the the FSCL?

- 5) Monitor availability of joint fires assets to support both tactical and operational fires?
- 6) Monitor the status of joint air and NSF requests and availability of support?
- 7) Monitor recommendations of the JTCCB?
- 8) Monitor availability of ammunition and spare joint fires major end items?
- 9) Monitor JFACC preparation of the ATO?
- 10) Ensure that joint fires aspects of CCIR were current?
- 11) Ensure that locations of SOF and long range reconnaissance patrols (LRRPs) are known and that the joint fires plan was adjusted to avoid fratricide and to provide joint fire support as required for direct action missions or contingency operations?

d. Did you obtain from J3 Plans any changes to JTF DST?

4. Integration of Joint Targeting. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you obtain assistance from JFFC in reviewing and coordinating detailed fire support operations and joint fires? Did you coordinate use of intelligence, artillery, NSF, surface-to-surface rocket and missile artillery, armed helicopters, USAF, USN, USMC, and/or SOF assets to engage the enemy?

b. Did you recommend necessary changes to maneuver control and fire support coordinating measures to facilitate component and joint operations?

c. Did you ensure that rear area joint fire support was coordinated with the joint rear area coordinator (JRAC) and the commander of the Tactical Combat Force (TCF) to include identification of restricted fire and NFAs?

5. Rehearsal of Operations. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you conduct a rehearsal of the operations plan? Were joint fires and fire support plans rehearsed concurrently with the operations plan in order to ensure appropriate synchronization? Did the rehearsal includes CAS, NSF, armed helicopters' fire support, PSYOP, and EW? Did you check to ensure that detailed rehearsals of JAAT and JSEAD were accomplished by components with appropriate representation by all participants?

b. Did rehearsals address strategic, operational, and tactical fires?

c. Did rehearsals cover acquisition, observation, timing, attack, and BDA of HPTs? Did backup systems participate in the rehearsals? Did rehearsals include hand-off procedures from acquisition assets to attack systems to engage TCTs?

d. Did rehearsals include the positioning and displacement plan for all joint fires and target acquisition assets?

e. Did rehearsals include all aspects of collecting information to enable BDA?

f. Did rehearsals incorporate measures to prevent fratricide, non-essential collateral damage, and noncombatant casualties; measures include FSCMs, ROE, ACP, and IFF procedures?

g. Did land component's rehearsals include clearance procedures to facilitate firing across boundaries?

h. Did logistics rehearsals include ground and air movement, resupply procedures, and time schedules?

i. Did communication plan rehearsals include communications links between detection systems, the decision maker and delivery systems, as well as positioning and utilization of retransmission sites?

j. Were procedures to update the HPTL and synchronize the AGM and DST as the situation changes rehearsed?

k. Were required changes revealed by the JTF rehearsals passed to J3 Plans for integration into the joint fires and components' fire support plans?

6. Coordination with Higher, Adjacent, Supported, and Supporting Elements.

Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you ensure that component liaison officers were knowledgeable and current on all aspects of the joint fires plan? Did you ensure that liaison officers from other headquarters were updated?

b. Did you ensure that procedures and targets to reinforce fires across boundaries were coordinated when required?

c. Did you ensure that you were debriefed on joint fires and component fire support from JTF liaison officers located at component HQs or after their visits to other headquarters?

d. Did you provide continuous updates for the CJTF and other members of the staff regarding joint fires?

e. Did you disseminate shifts to the FSCL location as it was moved?

f. Did you ensure key aspects of the joint fires plan and requirements for theater level joint fires and RSTA assets were included in update briefings to the unified command?

7. Battlefield Visualization. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you provide the information necessary for CJTF to "visualize" the battlefield and for other staff sections to keep abreast of the current situation?

b. Did you ensure that the J2:

1) Coordinated targeting and damage assessment requirements and locations of RSTA assets with components to ensure unity of effort and synchronization of RSTA operations with fires?

2) Provided and constantly updated information to the CJTF regarding the military aspects of the terrain as it relates to joint fires; e.g., elevation, soil density, vegetation, and masking?

3) Provided latest information regarding potential targets of opportunity, as well as enemy vulnerabilities to indirect fires, air-delivered munitions? Did this include the status and location of enemy fire support assets and their vulnerability to counter fires?

4) Developed BDA and recommended re-targeting as appropriate?

c. Did you present any JFACC recommended changes for apportionment and the JIPTL to the CJTF?

d. Did you continually update and provide the CJTF with the location, disposition, status, and capability of all JTF joint fires assets and the effectiveness of the joint fires plan?

e. Did you provide updates to the CJTF regarding the location, status, and disposition of target acquisition assets and recommend changes as appropriate?

f. Did you report to CJTF any changes to apportionment and JIPTL recommended by the JTCB?

g. Did you who disseminate CJTF changes to or additional CCIR to other JTF staff members and components as the battle progressed?

8. Current Battle Activities. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you pass on to higher, adjacent, and lower headquarters CJTF decisions made in response to changes in METT-T?

b. Did you check with JFFC-E to ensure they:

- 1) Provided responses for new CCIRs related to fires?
- 2) Monitored employment of joint fires IAW the JIPTL and DST?
- 3) Anticipated other joint fires requirements as changes occurred on the battlefield by:
 - a) Understanding the respective commanders' intents?
 - b) Remaining knowledgeable regarding battlefield events and the flow of the battle?
 - c) Following and war gaming the JTF battle through the use of templates?
 - d) Continuing the IPB process in coordination with the JTF J2?

c. Did you, the J2 Staff Section, the JFFC-E, and C2W officer, develop combat assessments (CA) with reattack recommendations? Were they presented to the JTCCB for its consideration? Have JTCCB recommendations for changes in targeting action or allocation been presented to CJTF?

d. When joint fires did not achieve CJTF's intent due to unanticipated enemy actions or other battlefield events, did you ensure that the JFFC-E conducted accelerated fire planning in coordination with the service and functional component staffs? Was accelerated fire support planning based on updated IPB and changes to the JTF OPLAN? Were new targets identified and incorporated into the JIPTL in order to match targets to available weapons systems? Were joint/multinational operational firepower resources reallocated as necessary?

e. When LCC changed the location of the FSCL, did other components disagree with its location? If so, did you present issue to the JTCB for resolution? If unresolved there, did you brief CJTF for his resolution?

9. Tracking and Supporting the Battle. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you coordinate among the J3 sections at JOC, JTOC, and JRTOC to synchronize the targeting effort as it was being executed by:

- 1) Executing planned fires IAW the JTF plan and the DST?
- 2) Continually coordinating with the JTF staff to ensure that fires adequately supported the concept of operations?
- 3) Evaluating fire requests in light of other requirements and joint fires resources available? Providing, denying, or substituting other joint fires means within the scope of the delegated authority?
- 4) Coordinating attack of targets of opportunity obtained by JTF and supporting target acquisition assets; e.g., UAV, LRSU, sensors, radars, JSTARS, and SOF with the appropriate components?
- 5) Monitoring and coordinating execution of AI with the JFACC?
- 6) Processing and coordinating JSEAD and JAAT missions?
- 7) Monitoring immediate CAS and NSF requests?
- 8) Ensuring that the Airspace Coordination Authority (ACA) was kept current on joint fires and fire support operations?
- 9) Monitoring the availability and employment of special munitions; e.g., FASCAM, Search and Destroy Armor Munitions (SADARM), smoke, and illumination as outlined in the joint fires plan?

b. Did you ensure that the JFFC synchronized and integrated fires with JTF OPLAN by:

- 1) Performing target analyses?
- 2) Coordinating with subordinate fire support cells to integrate fires with maneuver?
- 3) Coordinating with JTF staff to ensure that CAS, AI, and NSF were integrated into the battle and synchronized with artillery fires, EW, and SOF and armed helicopter operations?
- 4) Coordinating the timing and duration of offensive EW (e.g., jamming) to support JTF maneuver and attacks by lethal systems?

c. Did you continue to track the battle flow through:

- 1) Spot reports and situation reports?
- 2) Interstaff coordination?
- 3) Monitoring communications channels?
- 4) BDA?
- 5) CA?

10. Battlefield Updates (METT-T Based). Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you provide updates on the status of land component field artillery, EW, and target acquisition assets?

b. Did you ensure that JFACC representative, NGLO, and other representatives from the components provided updates regarding status of CAS, AI, and other air assets, and status and availability of NSF and SOF?

c. Did updates include:

- 1) CA of previously executed fires?
- 2) Recommendations for re-targeting and re-apportionment of joint fires assets?
- 3) Planned movement of target acquisition and delivery assets with assessment of consequences in terms of availability of fires?
- 4) Types and quantity of munitions available with assessment of consequences in terms of availability of fires?

11. Supporting CJTF Decision Making Process on Operational Actions/Direction Under Time Constraints. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you pass on CJTF decisions on re-targeting, re-apportionment of joint fires assets, or changes to JTF target list to J2 Staff Section, JFFC-E, JFACC, component commanders, and the JTCCB?

b. Did you immediately notify CJTF concerning events which indicated the joint fires plan execution was not occurring as envisioned and recommends and/or takes corrective actions?

c. Did you review and modify the joint fires plan and DST to keep pace with the JTF ongoing battle, to support unplanned battlefield events, and to incorporate CJTF decisions?

d. Did you ensure that JFACC was informed of all changes so that he could modify JIPTL to incorporate CJTF decisions?

e. Did you capture and disseminate any CJTF decisions regarding changes to the fires plan to component commands and the unified command HQ?

12. Consolidation and Reorganization. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you obtain reports on status of all joint fires assets to include target acquisition, air, naval surface fires, EW, PSYOP, and field artillery assets and:

- 1) Report status of assets through the J3 to the unified command HQ?
- 2) Monitor and assist efforts to fix, replace, resupply, and cross level battlefield joint fires losses?

b. Did you monitor component fire and target acquisition asset reorganization and redistribution?

c. Did you ensure that fires were reprioritized to support consolidation?

d. Did you conduct an internal after action review (AAR) of joint fires operations and participate in JTF and component AARs?

e. Did you provide appropriate input for CJTF's conduct of joint fires operations AAR? [See Appendix E (Self-Assessment Tools for Overall JTF Joint Fires AAR).]

f. Have you checked with J3 Plans on their planning efforts for projected future operations or requirements?

APPENDIX C
J2 Staff Section
Joint Fires Responsibilities

1. **Purpose.** This appendix identifies, organizes, and lists in logical sequence all of the J2 Staff Section tasks necessary to perform its joint fires responsibilities.

2. **Establishment of Joint Task Force (JTF) and Initial Planning.**

a. Corps headquarters (HQ) receives the operations order (OPORD) from unified commander establishing the corps as a JTF and assigning mission and joint operations area (JOA).

b. The corps commander organizes the JTF HQ with personnel assigned from the unified command, his headquarters, and the components, and becomes Commander, JTF (CJTF). *[NOTE: Given the unified commander's assessment of the situation, he will ensure that the CJTF is provided the required personnel from his headquarters and other services to fully integrate a joint staff. Such augmentation often includes a deputy from another service.]*

c. J2 Staff Section assists J3 Plans during initial planning phase in:

1) Determining the conditions required to meet the desired military end state.

[NOTE: The desired military end state will be provided by the unified commander. It is one of the required conditions to achieve the national strategic end state. The two end states are not synonymous.]

2) Determining campaign objectives and tasks required to accomplish them.

3) Determining constraints and restrictions; e.g., rules of engagement, overflight restrictions, political considerations.

4) Reviewing assigned forces to determine adequacy of the force to perform the tasks necessary to accomplish the mission, in order to assess the proper mix of forces and deployment sequence of the JTF.

d. J2 Staff Section planners participate in meeting of JTF joint planning group (JPG). This meeting is conducted by J3 Plans for component and functional planners in order to begin parallel planning.

e. J2 Staff Section accomplishes the following:

1) Orients intelligence preparation of the battle space (IPB) on the JTF mission.

2) Produces initial drafts of CCIR and EEI for JPG discussion.

3) Coordinates with the unified command Joint Intelligence Center (JIC) for the following purposes:

- a) Determination of availability of national and theater RSTA assets.
- b) Update of intelligence database.

f. J2 Staff section provides J3 Plans an initial estimate of what J2 personnel should be in the JTF HQ advance element and what RSTA assets should be scheduled into the operational area in what sequence. J3 Plans consolidates this information and passes it to the J4 for him to begin coordination with the unified command for deployment scheduling.

g. J2 Staff assists J3 Plans in initial joint fires planning by providing information on the target acquisition assets available to the JTF from components and coalition members.

3. Operational Mission Analysis and CJTF's Initial Planning Guidance.

a. J2 Staff Section participates in J3 Plans supervised analyzing of the mission; all specified and implied tasks required for mission accomplishment are identified.

b. J2 Staff Section collects information on:

- 1) Threat forces order of battle.
- 2) Centers of gravity (and related high-payoff targets [HPTs]).
- 3) The nature and characteristics of the JOA and areas of interest. In addition to terrain and weather, this should include information on the local economy, agricultural, unique culture, religion(s), level of technological advancement (first world/third world/combo), minority populations/political organizations, and any other considerations deemed useful.

c. J2 Staff Section participates with J3 Plans and J6 in the initial planning for command and control warfare (C2W) operations (encompasses OPSEC, PSYOP, EW, deception, and physical destruction of enemy command and control [C2] nodes and other C2W targets).

d. J2 Staff Section obtains information collected by Civil Affairs Staff Officer concerning locations of refugees; noncombatants; significant historic, cultural and religious structures; and population centers which may restrict delivery of fires and require fire support coordination measures (FSCMs), e.g., no fire areas (NFAs) and restricted fire areas (RFAs).

- e. J2 Staff Section assists J3 Plans in preparation for initial JTCB meeting and:
 - 1) Provides input for the JTCB to identify high-value targets (HVTs) and prepares initial joint target lists (JTLs). *[NOTE: In some cases an initial target list will be provided by the unified command.]*
 - 2) Assesses requirements for, and availability of, all target acquisition assets.
- f. J2 Staff Section assists J3 Plans in monitoring the components' positioning of target acquisition assets to ensure that no gaps exist in supporting capabilities.
- g. J2 Staff Section assists J3 Plans in briefing CJTF on recommendations for CJTF Initial Planning Guidance. Briefing includes:
 - 1) Restatement of mission based on operational mission analysis.
 - 2) Initial statement of intent to include CJTF vision of tasks to be accomplished to achieve mission requirements, priorities for deployment and positioning of forces, and conditions to be achieved for the desired military end state.
 - 3) Recommended CCIR and EEI.
 - 4) Force protection measures.
 - 5) Guidance for C2W operations.
 - 6) Clear statement of intent for the use of fires and component fire support (to include priorities) and delineation of how these assets support the maneuver concept.
 - 7) Timelines.
- h. J2 Staff Section determines intelligence requirements and needs based on approved CJTF Initial Planning Guidance and identifies to unified command the JTF requirements for theater level support.

4. Developing and Issuing Warning Order.

- a. J2 Staff Section assists J3 Plans in developing the JTF Warning Order. It is approved by the CJTF and is disseminated to all subordinate and supporting units.
- b. J2 Staff Section provides J3 Plans the following information for the Joint Planning Group (JPG) and for the joint fires planners as a part of the JTF warning order. *[NOTE: The CJTF may establish a JPG to serve as a focal point for deliberate planning for the JTF.]*
 - 1) Requirements for positioning of target detection assets.
 - 2) Predicted impact of terrain and weather on fires.

5. Preparation of Mission Estimate to Include Development of Courses of Action.

a. J2 Staff Section representative attends JTCCB meeting to assist in JTCCB's initial development of broad recommendations to JFACC.

b. J2 Staff Section assists J3 Plans in the estimate process based on restated mission, the CJTF's stated intent, and the factors of METT-T.

c. J2 Staff Section determines and identifies the availability of all target acquisition means and provides this data and a recommended deployment sequence and force mix to the JPG in order to assist in COA development.

d. JPG considers all available fire support systems to include target acquisition assets when developing the joint fires estimate.

e. Upon receipt of proposed COAs from JPG, J2 Staff Section recommends the positioning of target acquisition systems for each COA to J3 Plans, and provides an estimate of how well each COA exploits enemy vulnerabilities and attacks centers of gravity and related high-payoff targets.

f. J2 Staff Section "scrubs" JFACC's and joint integrated priority target list (JIPTL) to ensure target priorities are in line with CJTF guidance.

6. Analysis and Comparison of Courses of Action.

a. J2 Staff Section participates in the courses of action (COA) comparison process (supervised by J3 Plans), paying particular attention to how well each COA exploits enemy vulnerabilities and attacks centers of gravity and related high-payoff targets.

b. J2 Staff Section reviews the fire plan for each COA and provides:

1) Target-value analysis (TVA) of each COA. Factors influencing such analysis include:

- a) Impact on enemy operations and probable responses.
- b) Criticality of target as it relates to the success of the friendly mission.

2) Initial high-payoff target list (HPTL).

3) The best locations and times to attack HPTs, identified and expressed as TAs.

4) Detection means for HPTs, to include backup means.

5) Decision points (DPs) or decision timelines (recorded on the DST).

6) Plans for acquiring both known and unknown time critical targets (TCTs).

7) Positioning and repositioning of all target acquisition assets.

8) Plans for the integration of PSYOP and EW assets.

9) Plans to conduct C2W warfare, including EW against enemy command, control, communications, computers, and intelligence (C⁴I) assets and PSYOP against personnel.

10) Linkage of BDA assets to the attack of HPTs.

c. J3 Plans compares COAs. During comparison process, J2 Staff Section participates in the comparison and rating of each course of action in terms of the ability of available target acquisition assets to support the CJTF intent.

d. Additional HPTs are developed from the COA comparison process and are added to the JTL.

e. The J3 chooses the course of action that is most supportable from a joint fires perspective and prepares his recommended COA for briefing to the CJTF. Components are informed.

f. J2 Staff Section assists J3 Plans in the preparation of briefing by J3 to CJTF on recommended COA. Briefing includes:

- 1) Description of each COA and including joint fires priorities (RSTA assets, AI, CAS, NSF, artillery, EW, PSYOP, deception operations), apportionment, and desired effects.
- 2) Rationale for selecting recommended COA.
- 3) Request for CJTF approval of recommended COA.

g. J2 Staff Section assists J3 Plans in making any modifications to the COA directed by CJTF and ensures that the following occurs:

- 1) Unified command's J2 is informed of CJTF's decision.
- 2) Supporting and subordinate fire support commands' intel staffs are notified regarding CJTF's decision.

7. Preparation of JTF OPORD/FRAGO.

a. J2 Staff section assists J3 Plans and JFFC in finalizing the joint fires plan, based on component input and coordination, to include preparation of paragraph 3a(2) Fires and the joint fires annex, complete with the JIPTL, protected targets list, joint fires execution matrix, and overlays.

b. J2 Staff Section obtains JIPTL from the JFACC for validation by the JTCCB and approval by the CJTF. Once approved by the CJTF, targets are assigned by the JFACC on the ATO. Targets within component AOs which are not on the JIPTL and

ATO are detected, engaged, and assessed by the components' organic and/or supporting fire support systems.

c. J2 Staff Section provides the following to the joint fires appendix of Annex C - Operations, with accompanying appendices, target list matrices, and overlays:

- 1) Enemy fire support capabilities including artillery, missiles and rockets, air defense, attack helicopters, tactical air, EW, naval surface fires, and NBC capabilities, as well as target acquisition capabilities.
- 2) Positioning and use of all target acquisition assets and delivery systems. A sensor/attack matrix may be used in order to ensure that all HPTs are acquirable and that a delivery system is available to attack the target.
- 3) JIPTL.
- 4) Instructions for attack of HPTs and time critical targets (TCTs).
- 5) Plans for offensive EW, PSYOP, and other non-lethal means of fires.

d. J2 Staff Section provides intel input into body and appropriate annexes of the OPOD/FRAGO.

- 1) Task organization.
- 2) Intelligence: Appendix 4 - Targeting.
- 3) Operations:
 - a) Appendix 3 - C2W.
 - b) Appendix 4 - PSYOP.
 - c) Appendix 9 - Reconnaissance.
 - d) Appendix 10 - Counter C3.
 - e) Appendix - Joint fire support.
 - f) Appendix - Synchronization matrix.
- 4) Logistics: RSTA supply, maintenance, and transportation requirements.
- 5) Civil affairs.
- 6) Command relationships.
- 7) C3 systems.
- 8) Space operations.
- 9) Force protection.
- 10) Execution checklist.

e. J2 Staff Section prepares the JTF collection plan giving particular consideration to the satisfaction of JTF and component BDA requirements.

f. J2 Staff Section coordinates with service and functional commands' intel staffs to share information and facilitate parallel planning.

8. OPORD/FRAGO Approval.

- a. J2 Staff Section provides the following for J3 Plans briefing of the joint fires plan:
 - 1) JIPTL.
 - 2) Location, status, and mission of target acquisition and delivery assets.
 - 3) Detection and attack of HPTs and TCTs.
 - 4) BDA plan.
 - 5) Integration of joint fires with C2W and vice versa.
- b. J2 Staff Section assists in J6 briefing of the EW plan to include air and surface electronic combat operations.
- c. J2 Staff Section prepares and briefs the information warfare plan.
- d. J2 Staff Section ensures that necessary intel information from the joint fires plan (e.g., JIPTL and RSTA priorities) is integrated into the JTF DST.

9. Plan Refinement.

- a. J2 Staff Section actively solicits components' intel staffs' comments and any recommended changes.
- b. J3 Plans presents components' comments and recommendations to the JTCB. JTCB provides advice to CJTF and guidance to J3.
- c. After components' and JTCB's input is received, the joint fires plan is refined and improved to accommodate component requirements and meet the CJTF's intent.
- d. Joint fires plan and target lists are modified and refined as new intelligence is received regarding enemy locations and capabilities, and as status of JTF elements and coalition capabilities changes.
- e. Plan is developed to provide sufficient redundancy to ensure that all HPTs can be attacked if primary acquisition or engagement means are unavailable or rendered unusable.
- f. Force protection measures are developed by J3 Plans for all key acquisition assets. J2 Staff Section informs all concerned.
- g. Plans for attacks of high value/high-payoff targets are refined to ensure that targets are engaged by the appropriate fire support asset and that damage assessment is conducted as required.
- h. Hand off procedures from target detection means to attack systems are refined to engage TCTs.

10. Plan Updates.

- a. J2 Staff Section assists J3 Plans in providing periodic updates regarding modifications and refinements to the joint fire plan.
- b. J2 Staff Section monitors the progress of intel preparations for the joint fire plan and reports/briefs the following, as required, for 72 hours out:
 - 1) Changes to targeting guidance, priorities, JIPTL.
 - 2) Current location, status, and operations of all target acquisition assets.
 - 3) Status of JFACC planning and targeting.
 - 4) Changes to plans for the use of EW assets.
- c. J2 Staff Section informs CJTF, JTF staff, and components of changes.

11. Force Protection Operations and Activities.

- a. J2 Staff Section provides J3 with up-to-date information on enemy locations and capabilities including target acquisition and joint fires assets.
- b. J3 Plans, assisted by the J2 Staff Section, coordinates with service components to ensure that target acquisition assets have been provided adequate priority to assure survivability and force protection.
- c. J2 Staff Section ensures target acquisition assets are positioned to provide target acquisition means for long range fires including non-lethal fires for the security force.
- d. J3 Plans and C2W officer, assisted by the J2 Staff Section, integrate fires with C2W.
- e. OPSEC measures are developed and planned to avoid detection of the security force locations as well as those of JTF target acquisition and joint fires assets.
- f. Required changes revealed by the JTF rehearsals (obtained from J3 Ops) are integrated into the intel portions of the joint fires and components' fire support plans.
- g. Additional input from higher, lower, or adjacent fire planners resulting from OPPLAN rehearsals is also incorporated into the joint fires plan.
- h. J2 Staff Section disseminates all refinements and changes to intel portions of the joint fires plan to higher, lower, supporting, and adjacent fire planners.

12. Mission Preparation Phase.

- a. J2 Staff Section records results of JTCB meetings with any modifications requiring refinements to the JIPTL provided by the JFACC.
- b. J2 Staff Section monitors the status of joint fires preparations.
 - 1) Availability of joint electronic warfare assets and PSYOP capabilities to support the joint fires plan.
 - 2) Preparation and status of target acquisition units and assets.
 - 3) Changes to target lists based on updated intelligence.
 - 4) Weather updates.
- c. J2 Staff Section monitors component preparation:
 - 1) Monitors availability of target acquisition assets to support both tactical and operational fires.
 - 2) Monitors the status of joint air reconnaissance requests and availability of support.
 - 3) Monitors recommendations of the JTCB.
 - 4) Monitors JFACC preparation of the ATO.
 - 5) Provides J3 with locations of SOF and long range reconnaissance patrols (LRRPs), so that J3 can adjust the joint fires plan to avoid fratricide and to provide joint fire support as required for direct action missions or contingency operations.
- d. J2 Staff Section facilitates sharing of information between service and functional commanders, and recommends changes to JTF Decision Support Template (DST).

13. Integration of Joint Targeting.

- a. The J3, assisted by the JFFC and J2, is responsible for planning and coordinating detailed fire support operations and joint fires. *[NOTE: Joint fires operations may involve the coordinated use of intelligence, artillery, NSF, surface-to-surface rocket and missile artillery, armed helicopters, USAF, USN, USMC, and/or SOF assets to engage the enemy.]*
- b. J2 Staff Section in coordination with the JFFC, identifies requirements and nominates targets to the JFACC that are outside the component boundaries.
- c. J2 Staff Section supports the joint target list development process by providing targets and targeting information to the unified command JIC and the JTF JFACC.
 - 1) Unified command provides weaponeering support as required.
 - 2) Targets identified by the unified command for JTF attack are provided to the JTF for execution.

d. J2 Staff Section obtains JFACC developed target lists and reviews them to ensure they support the concept of operations and meet CJTF's intent.

- 1) Target lists provide a description, precise location at time of desired attack, target composition, desired effects, and rationale for engagement.
- 2) JTCB reviews target lists for consistency with CJTF intent for joint fires, inclusion of unified command and JTF targets, and component requirements.
- 3) After the CJTF receives a recommendation from the JTCB and makes a decision regarding targeting and apportionment, the JFACC staff plans and executes the missions through the ATO.

e. J2 Staff Section identifies BDA requirements that exceed components' and JTF's organic capabilities and coordinates coverage with unified command J2.

14. Planning JTF Command Group and Command Posts Locations.

a. J2 Staff Section provides required communications considerations to J3 Plans, so that J3 Plans can plan the locations of the JTF command group and command posts so they are positioned to support and control the battle.

b. The Joint Operations Center (JOC) serves as the JTF main command post and is centrally located to best control all JTF operations; normally operates under the control of the JTF Chief of Staff.

c. The JTF tactical operations center (JTOC) is located well forward where it can best control JTF units in contact; it normally operates under the control of the JTF J3.

d. The joint rear tactical operations center (JRTOC) is located in the joint rear area and is under control of the Joint Rear Area Commander (JRAC). Fires are coordinated by the tactical combat force (TCF) commander through the JRTOC with appropriate component and host nation combat commanders assigned to rear operations.

15. Rehearsal of Operations. *[NOTE: Rehearsals are always conducted, but can range from a full rehearsal to a terrain model, map, or radio back-briefs. At the JTF or land component level, most rehearsals will be in the form of brief backs and will be more general than rehearsals at tactical unit level.]*

a. J2 Staff Section assists J3 Ops in conducting rehearsal of the operations plan. Joint fires and fire support plans are rehearsed concurrently with the operations plan in order to ensure appropriate synchronization. Includes RSTA use in support of CAS, NSF, armed helicopters' fire support, PSYOP, and EW.

b. Rehearsals address strategic, operational, and tactical fires.

c. Rehearsals cover acquisition, observation, timing, attack, and BDA of HPTs. Backup systems should participate in the rehearsals. Rehearsals must include hand-off procedures from acquisition assets to attack systems to engage TCTs.

d. Rehearsals include the positioning and displacement plan for all joint fires and target acquisition assets.

e. Rehearsals include all aspects of collecting information to enable BDA.

f. Rehearsals incorporate measures to prevent fratricide, non-essential collateral damage, and noncombatant casualties; measures include FSCMs, ROE, ACP, and IFF procedures.

g. Land component's rehearsals include clearance procedures to facilitate firing across boundaries.

h. Logistics rehearsals include ground and air movement, resupply procedures, and time schedules.

i. Communication plan rehearsals include communications links between detection systems, the decision maker and delivery systems, as well as positioning and utilization of retransmission sites.

j. Procedures to update the HPTL and synchronize the AGM and DST as the situation changes are rehearsed.

k. J2 Staff Section passes required changes revealed by the JTF rehearsals to J3 Plans for integration into the joint fires and components' fire support plans.

16. Coordination with Higher, Adjacent, Supported, and Supporting Elements.

a. J2 Staff Section ensures that component liaison officers are knowledgeable and current on all intel aspects of the joint fires plan. Liaison officers from other headquarters are updated.

b. J2 Staff Section receives debriefs on intel aspects of joint fires and of component fire support from JTF liaison officers located at component HQs or after their visits to other headquarters.

c. J2 Staff Section provides continuous updates for the CJTF and other members of the staff regarding current intel affecting joint fires.

d. J2 Staff Section ensures key aspects of the joint fires plan and requirements for theater level joint fires and RSTA assets are included in update briefings to the unified command.

17. Battlefield Visualization.

a. One of J2's main functions is to provide the information necessary for CJTF to "visualize" the battlefield and for other staff sections to keep abreast of the current intel situation. CJTF will personally observe execution of critical aspects of the operation and will receive direct situation reports from component commanders. However, he must be able to come into the J3 Ops area at any time and receive the most accurate operational information available. *[NOTE: After considering the factors of METT-T, the CJTF adjusts his position on the battlefield to best control and influence fires as well as maneuver and other operations.]*

b. The J2 Staff Section:

1) Coordinates targeting and damage assessment requirements and locations of RSTA assets with components to ensure unity of effort and synchronization of RSTA operations with fires.

2) Provides and constantly updates information to the CJTF regarding the military aspects of the terrain as it relates to joint fires; e.g., elevation, soil density, vegetation, and masking.

3) Provides latest information regarding potential targets of opportunity, as well as enemy vulnerabilities to indirect fires, air-delivered munitions. This will include the status and location of enemy fire support assets and their vulnerability to counter fires.

4) Develops BDA and recommends re-targeting as appropriate.

c. J2 Staff Section presents any JFACC recommended changes to the JIPTL.

d. J2 Staff Section continually updates and provides the CJTF with BDA and an assessment as to the effectiveness of the joint fires plan.

e. J2 Staff Section continually provides updates to the CJTF regarding the location, status, and disposition of target acquisition assets and recommend changes as appropriate.

f. J2 Staff Section reports to CJTF any changes to the JIPTL recommended by the JTCB.

g. The CJTF changes or provides additional CCIR to the J3 who disseminates requirements to other JTF staff members and components as the battle progresses.

18. Current Battle Activities.

a. Based on what he sees and the information provided to him, CJTF makes appropriate decisions in response to changes in METT-T.

b. The J2 Staff Section:

- 1) Provides responses for new CCIRs related to fires.
- 2) Monitors employment of joint target acquisition assets IAW the DST.
- 3) Anticipates other joint fires requirements as changes occur on the battlefield by:
 - a) Understanding the respective commanders' intents.
 - b) Remaining knowledgeable regarding battlefield events and the flow of the battle.
 - c) Following and war gaming the JTF battle through the use of templates.
- 4) Continues the IPB process in coordination with the J3 Ops and JFFC.

c. J2 Staff Section, in close coordination with JFFC and C2W officer, develops combat assessments (CA) with reattack recommendations. JTCB considers BDA and CA; recommends targeting action or change in targeting action or allocation.

d. In the event that the joint fires do not achieve CJTF's intent due to unanticipated enemy actions or other battlefield events, J2 Staff Section assists J3 Ops and JFFC in conducting accelerated fire planning in coordination with the service and functional component staffs.

- 1) Accelerated fire support planning is based on updated IPB and changes to the JTF OPLAN.
- 2) New targets are identified and incorporated into the JIPTL in order to match targets to available weapons systems. Joint/multinational operational firepower resources are reallocated as necessary.

19. Tracking and Supporting the Battle.

a. J2 Staff Section assists J3 Ops and the JFFC in coordinating among JOC, JTOC, and JRTOC to synchronize the targeting effort as it is being executed:

- 1) Executes planned fires IAW the JTF plan and the DST.
- 2) Continually coordinates with the JTF staff to ensure that target acquisition assets adequately support the concept of operations.
- 3) Evaluates fire requests in light of other requirements and joint fires resources available. Provides, denies, or substitutes other joint fires means within the scope of the delegated authority.
- 4) Coordinates attack of targets of opportunity obtained by JTF and supporting target acquisition assets; e.g., UAV, LRSU, sensors, radars, JSTARS, and SOF with the appropriate components.
- 5) Monitors and coordinates BDA of AI with the JFACC.

b. J2 Staff Section assists J3 Ops and the JFFC in ensuring that fires are synchronized and integrated with JTF OPLAN by:

- 1) Performing target analyses.
- 2) Coordinating the timing and duration of offensive EW (e.g., jamming) to support JTF maneuver and attacks by lethal systems.

c. J2 Staff Section ensures that assessment asset managers (e.g., AOC, UAV, SOF units) are kept updated on target locations and are tasked to provide damage assessments as attacks are executed.

d. J2 Staff Section continues to track the battle flow through:

- 1) Spot reports and situation reports.
- 2) Interstaff coordination.
- 3) Monitoring communications channels.
- 4) BDA.
- 5) CA.

20. Battlefield Updates (METT-T Based).

a. J2 Staff Section continues to provide near real-time intelligence on enemy situation.

b. J2 Staff Section provides updates on the status of EW and target acquisition assets.

c. J2 Staff Section provides casualty assessment (CA) updates which include:

- 1) CA of previously executed fires.
- 2) Recommendations for re-targeting and re-apportionment of joint fires assets.
- 3) Planned movement of target acquisition and delivery assets with assessment of consequences in terms of availability of fires.

21. Supporting CJTF Decision Making Process on Operational Actions/Direction Under Time Constraints.

a. The CJTF directs re-targeting, re-apportionment of joint fires assets, or changes to JTF target list based on his own appreciation of the situation, CA, and recommendations from J2, J3, JFACC, component commanders, and the JTCB.

b. Understanding the CJTF's intent, J2 Staff Section immediately notifies him concerning events which indicate that intel portions of the joint fires plan execution is not occurring as envisioned and recommends and/or takes corrective actions.

c. J2 Staff Section reviews and modifies the intel portions of the joint fires plan and DST to keep pace with the JTF ongoing battle, to support unplanned battlefield events, and to incorporate CJTF decisions.

d. The CJTF's decisions regarding changes to the intel asset utilization are captured by J2 Staff Section and are disseminated to component commands. An update is also provided to the unified command HQ on a periodic basis.

22. Consolidation and Reorganization.

a. J2 Staff Section obtains reports on status of all target acquisition, EW, and PSYOP assets.

- 1) Reports status of assets through the J3 to the unified command HQ.
- 2) Monitors and assists efforts to fix, replace, resupply, and cross level battlefield losses.

b. J2 Staff Section monitors component target acquisition asset reorganization and redistribution.

c. J2 Staff Section supports J3 Ops conduct of internal after action review (AAR) of joint fires operations and participates in JTF and component AARs.

d. J2 Staff Section provides input to CJTF for his conduct of AAR of joint fires operations.

e. JTF staff begins planning for projected future operations or requirements.

[NOTE: Future operations could include transition to another command, continuation of combat, commencement of peacekeeping, humanitarian assistance, or redeployment,

and disestablishment of the JTF depending on the situation and guidance from the unified commander.]

Self-Assessment Tools for J2 Staff Section's Mini-AARs

1. Self-Assessment and Feedback.

a. One of the major challenges to assessing training performance and giving meaningful feedback in the joint arena is finding the right people with the right expertise to conduct the assessment. At lower echelons, those personnel can be found in like units or in higher echelon units and can be tasked to perform assessment and feedback for other units' training. But for a joint task force at the corps level, it is often times impractical to task like or higher units for personnel. Additionally, during actual combat or for training at times other than during a major joint exercise, expert observers/controllers/trainers will not be present to provide necessary feedback. So where does one find the required expertise? It can be found among the corps JTF's own staff personnel. Therefore, the training performance measures and feedback methods contained in this guide were designed for **self**-assessment by personnel in those JTF staff sections involved with joint fires operations.

b. Many of the tasks performed by the JTF staff in joint fires operations are process oriented, as opposed to outcome oriented. To perform the processes involves, to a large degree, the performance of military "art" based on collective judgment. This is something difficult to measure *objectively*. It was, therefore, necessary to derive mainly *subjective* performance measurement tools.

c. The Self-Assessment Tools are to be used by the chief of each key JTF staff section to conduct a 10-15 minute mini-AAR (after action review) for his section at the conclusion of each iteration or phase of its joint fires processes. This allows him to give and receive feedback on how well the process was performed and on what needs to be fixed or improved for the next iteration. The Self-Assessment Tools:

- 1) Provide a reminder and a format to conduct on-going, semi-structured reviews of what's being done, for what purpose, and how well it's being done.
- 2) Provide a record of performance progress throughout the duration of a training exercise or during actual combat.
- 3) Provide a record of lessons learned for inclusion into the overall JTF Joint Fires AAR.
- 4) Identify tasks which require additional training or need added emphasis in future training exercises.

d. The Self-Assessment Tools for the J2 Staff Section are in the form of questions for the chief of the section to ask himself and the members of his section. They are arranged in general categories representing the sequence in which tasks are

performed. A mini-AAR should be performed at the conclusion of each of the following phases.

2. Establishment of Joint Task Force and Initial Planning. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

- a. How well was the staff section organized and how well did they work together?
- b. Have all relevant inputs from higher, adjacent, and lower headquarters been collected? Are they understandable and do they make operational sense? If not, has clarification been sought? From where?
- d. Did you evaluate the "Intel" and "Fires" annexes of existing OPLANs and CONPLANs related to this mission?
- e. Did you evaluate the "Intel" and "Fires" portions of the unified command's OPOD?
- f. Did you determine the conditions required to meet the unified commander's desired end state of the enemy forces as they relate to joint fires operations?
- g. Did you determine mission objectives and tasks required to accomplish them for intelligence agencies and RSTA assets?
- h. Did you determine constraints and restrictions; e.g., rules of engagement, overflight restrictions, political considerations?
- i. Did you review assigned forces to determine adequacy of the RSTA assets to perform the tasks necessary to accomplish the mission? Did you assess the proper mix of forces and deployment sequence of the JTF?
- j. Did you provide J3 Plans an initial estimate of what J2 staff personnel should be in the JTF HQ advance element and what RSTA assets should be scheduled into the operational area in what sequence?
- k. While performing these functions, various interfaces should have occurred. Were the following elements contacted for coordination, guidance, direction, or to obtain or give information? If not, why not?
 - 1) Theater and national level intelligence agencies?
 - 2) Intelligence counterparts in component and functional commands?
 - 3) Intelligence counterparts in allied nations/host nations?
 - 4) Subordinate elements organic to the corps?

- 5) Other JTF counterparts that may be deployed?
- 6) Other J Staff elements?
- 7) The JFFC-E?

- I. Did you determine the intelligence requirements based on the JTF mission?
 - m. Did you update the contingency plan intelligence estimate? Did this include background information?
 - n. Did you complete the intelligence preparation of the battle space?
 - o. Did you recommend the amounts and types of intelligence assets to be included in the task organization?
 - p. Did you determine the theater and national collection assets that would support the missions?
 - q. Did you develop a coverage and report schedule for the theater and national collection assets?
 - r. Did you identify gaps or holes in the collection plan?
 - s. Did you request additional intelligence assets to fill the gaps and holes?
 - t. Did you answer the CJTF's initial CCIR and EEI?
 - u. Did you adjust your collection efforts to as changes occurred in the CCIR and EEI?
 - v. Did you send or receive liaison officers to or from component and functional commands, allied nation and host nation forces/agencies to exchange information, intelligence and develop a working relationship rapport?
 - w. Did you include terrain and population information in the intelligence estimate?
 - x. Did you review the different threats such as terrorist threat, low intensity conflict, mid intensity conflict, air threat, naval threat?
 - y. Did you determine the products and assets that national agencies would provide?
 - z. Did you determine gaps in your collection efforts? Did you request additional assets or products to cover collection gaps?

3. Operational Mission Analysis and CJTF's Initial Planning Guidance. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be*

answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"

- a. Did you adjust, update and disseminate the enemy order of battle?
- b. Did you recommend changes in the order of battle?
- c. Did you compile the centers of gravity list? Can you explain why items were included/excluded from the list?
- d. Did you determine if there is any organized opposition to the threat leadership? If so, did you consider how to exploit it?
- e. Did you develop an estimate on how long the threat forces can be sustained during a conflict?
- f. Did you coordinate with the JFACC on the HVT/HPT and recommend targets that will reduce threat forces sustainability?
- g. Did you provide an estimate on the threat's ability to conduct low intensity combat operations?
- h. Did you identify targets that, if eliminated or neutralized, would reduce the threat's ability to conduct low intensity combat?
- i. Did you coordinate with allied nation, host nation and other services as needed?

4. Developing and Issuing Warning Order. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

- a. Did you assigns collection tasks, and provides staff support for the positioning of those assets?
- b. Were theater and national collection assets requested to provide reports that will indicate precise targeting locations.
- c. Did you brief the command and disseminate intelligence?

5. Preparation of Mission Estimate to Include Development of Courses of Action. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you provide predictive analysis on enemy responses to friendly courses of action? Did you cover a broad range of responses? Did you place yourself in the threat position and do a "what if" analysis?

b. Did you participate in the discussion of the friendly courses of action with the JPG?

6. Analysis and Comparison of Courses of Action. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you give an assessment on the impact that friendly operations will have on threat operations and their likely courses of action?

b. Were you able to give exact locations and times for the HPT's.

c. Were several collection assets monitoring and verifying HPT locations.

d. Did you develop a decision support template.

e. Did you plan for follow up (future) operations and adjust the collection plan as needed.

f. Were you involved in the targeting process? Did you use all the available assets including PSYOP, EW CAS, AI and NSF in addition to artillery?

g. Were any HPT added?

h. Were you ready to receive and disseminate BDA?

7. Preparation of JTF OPORD/FRAGO. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you give information about enemy fire support assets. Did this include intelligence on artillery, rockets, missiles, air defense weapons, attack helicopters, air forces EW, NSF, NBC and any target acquisition capabilities.

b. Was it necessary to adjust the collection plan to help gather this information?

c. Were the collection assets covering each HPT adequate to maintain knowledge of their location?

d. Did you assist in coordinating ESM for the ECM operations?

e. Was the intelligence appendix for the OPORD prepared on time and did it cover all necessary details?

8. OPORD/FRAGO Approval. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you provide information on HPT locations.

b. Did the collection include gathering BDA?

c. Did you continue to look into the future to predict enemy responses and courses of action?

9. Plan Refinement. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you provide information on HPT locations.

b. Did the collection include gathering BDA?

c. Did you continue to look into the future to predict enemy responses and courses of action?

10. Plan Updates. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you present the enemy situation in a way that was clear, concise, and easily understandable by the command group?

b. Did the briefing cover the latest locations of HPT's? Did it include changes in threat capabilities, newly identified HVT's that were not previously targeted, and a predictive analysis on future enemy activities?

c. Did the commander give you guidance that caused modifications in the collection plan? How rapidly were the changes enacted?

d. Did you know when to expect information from BDA?

11. Force Protection Operations and Activities. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

- a. Was the enemy situation continuously updated?
- b. Were counter reconnaissance/counter target acquisition plans made and recommended?

12. Integration of Joint Targeting. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

- a. Was an intelligence briefing given to update the JFACC on the current enemy situation?
- b. Were the situational and event templates current and up to date?
- c. Did your HVT/HPT list provide precise locations and recommending times of desired attack.
- d. Did you compare your collection efforts to the CCIR and update the collection plans as needed?
- e. Did your target list indicate those targets which did not have precise locations.
- f. Did you recommend other methods of attacking those targets (electronic warfare for example)?
- g. Did you perform predictive analysis on the enemy courses of action and locations?
- h. Did you compare target information against the HVT/HPT list?
- i. Did you recommend weapons selection for each target (i.e. precision guided munitions when exact location is known and accuracy is needed, other weapons when accuracy isn't as important)?
- j. Was the target list modified based due to intelligence provided?
- k. Did you discuss possibilities of collateral damage? Were your discussions persuasive?
- l. Did you coordinate with the unified command J2 Staff Section?
- m. Were subordinate elements tasked to provide BDA?
- n. Did you receive BDA from theater and national level?

13. Planning JTF Command Group and Command Posts Locations. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you provide required communications considerations to J3 Plans, so that J3 Plans could plan the locations of the JTF command group and command posts so they are positioned to support and control the battle?

b. Have you coordinated with the tactical combat force (TCF) commander through the Joint Rear Area Commander (JRAC) to ensure appropriate component and host nation combat commanders have assigned target acquisition assets to cover rear operations?

14. Rehearsal of Operations. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you assist J3 Ops in conducting rehearsal of the operations plan? Were joint fires and fire support plans rehearsed concurrently with the operations plan in order to ensure appropriate synchronization? Did rehearsal include use of RSTA assets in support of CAS, NSF, armed helicopters' fire support, PSYOP, and EW?

b. Did rehearsals address strategic, operational, and tactical fires?

c. Did rehearsals cover acquisition, observation, timing, attack, and BDA of HPTs? Backup systems should participate in the rehearsals? Did rehearsals include hand-off procedures from acquisition assets to attack systems to engage TCTs?

d. Did rehearsals include the positioning and displacement plan for all target acquisition assets?

e. Did rehearsals include all aspects of collecting information to enable BDA?

f. Did rehearsals incorporate measures to prevent fratricide, non-essential collateral damage, and noncombatant casualties; measures include FSCMs, ROE, ACP, and IFF procedures?

g. Did rehearsals of the communication plan include communications links between detection systems, the decision maker and delivery systems, as well as positioning and utilization of retransmission sites?

h. Were procedures to update the HPTL and synchronize the AGM and DST as the situation changes rehearsed?

i. Did you pass required changes revealed by the JTF rehearsals to J3 Plans for integration into the joint fires and components' fire support plans?

15. Coordination with Higher, Adjacent, Supported, and Supporting Elements.

Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. J2 Staff Section ensures that component liaison officers are knowledgeable and current on all intel aspects of the joint fires plan. Liaison officers from other headquarters are updated.

b. J2 Staff Section receives debriefs on intel aspects of joint fires and of component fire support from JTF liaison officers located at component HQs or after their visits to other headquarters.

c. J2 Staff Section provides continuous updates for the CJTF and other members of the staff regarding current intel affecting joint fires.

d. J2 Staff Section ensures key aspects of the joint fires plan and requirements for theater level joint fires and RSTA assets are included in update briefings to the unified command.

16. Battlefield Visualization. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you provide the information necessary for CJTF to “visualize” the battlefield and for other staff sections to keep abreast of the current intel situation? CJTF will personally observe execution of critical aspects of the operation and will receive direct situation reports from component commanders?

b. Did you:

- 1) Coordinate targeting and damage assessment requirements and locations of RSTA assets with components to ensure unity of effort and synchronization of RSTA operations with fires?
- 2) Provide and constantly update information to the CJTF regarding the military aspects of the terrain as it relates to joint fires; e.g., elevation, soil density, vegetation, and masking?
- 3) Provide latest information regarding potential targets of opportunity, as well as enemy vulnerabilities to indirect fires, air-delivered munitions? Did this include the status and location of enemy fire support assets and their vulnerability to counter fires?
- 4) Develop BDA and recommend re-targeting as appropriate?

c. Did you present any JFACC recommended changes to the JIPTL?

d. Did you continually update and provide the CJTF with BDA and an assessment as to the effectiveness of the joint fires plan?

e. Did you continually provide updates to the CJTF regarding the location, status, and disposition of target acquisition assets and recommend changes as appropriate?

f. Did you report to CJTF any changes to the JIPTL recommended by the JTCCB?

g. Did CJTF change or provide additional CCIR to the J3? Were these disseminated to other JTF staff members and components as the battle progressed?

17. Current Battle Activities. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered “yes” or “no.” If the answer is “yes,” then the next question should be “how well?”]*

a. Did you:

- 1) Provide responses for new CCIRs related to fires?
- 2) Monitor employment of joint target acquisition assets IAW the DST?
- 3) Anticipate other joint fires requirements as changes occurred on the battlefield by:
 - a) Understanding the respective commanders’ intents?
 - b) Remaining knowledgeable regarding battlefield events and the flow of the battle?

- c) Following and war gaming the JTF battle through the use of templates?
- 4) Continue the IPB process in coordination with the J3 Ops and JFFC?

b. Did you, in close coordination with JFFC and C2W officer, develop combat assessments (CA) with reattack recommendations? Were these presented to the JTCB for its consideration?

c. When joint fires did not achieve CJTF's intent due to unanticipated enemy actions or other battlefield events, did you assist J3 Ops and JFFC-E in conducting accelerated fire planning in coordination with the service and functional component staffs?

- 1) Was accelerated fire support planning based on updated IPB and changes to the JTF OPLAN?
- 2) Were new targets identified and incorporated into the JIPTL in order to match targets to available weapons systems? Were joint/multinational RSTA resources reallocated as necessary?

18. Tracking and Supporting the Battle. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you assist J3 Ops and JFFC-E in coordinating among JOC, JTOC, and JRTOC to synchronize the targeting effort as it was being executed? Did you:

- 1) Execute planned fires IAW the JTF plan and the DST?
- 2) Continually coordinate with the JTF staff to ensure that target acquisition assets adequately support the concept of operations?
- 3) Evaluate fire requests in light of other requirements and joint fires resources available? Provide, deny, or substitute other joint fires means within the scope of the delegated authority?
- 4) Coordinate attack of targets of opportunity obtained by JTF and supporting target acquisition assets; e.g., UAV, LRSU, sensors, radars, JSTARS, and SOF with the appropriate components?
- 5) Monitor and coordinate BDA of AI with the JFACC?

b. Did you assist J3 Ops and JFFC-E in ensuring that fires were synchronized and integrated with JTF OPLAN by:

- 1) Performing target analyses?

2) Coordinating the timing and duration of offensive EW (e.g., jamming) to support JTF maneuver and attacks by lethal systems?

c. Did you ensure that assessment asset managers (e.g., AOC, UAV, SOF units) were kept updated on target locations and were tasked to provide damage assessments as attacks were executed?

d. Did you continue to track the battle flow through:

- 1) Spot reports and situation reports?
- 2) Interstaff coordination?
- 3) Monitoring communications channels?
- 4) BDA?
- 5) CA?

19. Battlefield Updates (METT-T Based). Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you continue to provide near real-time intelligence on enemy situation?

b. Did you provide updates on the status of EW and target acquisition assets?

c. Did you provide casualty assessment (CA) updates which included:

- 1) CA of previously executed fires?
- 2) Recommendations for re-targeting and re-apportionment of joint fires assets?
- 3) Planned movement of target acquisition and delivery assets with assessment of consequences in terms of availability of fires?

20. Supporting CJTF Decision Making Process on Operational Actions/Direction Under Time Constraints. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you provide the CJTF recommendations for re-targeting, re-apportionment of joint fires assets, or changes to JTF target list based on your appreciation of the situation, CA, and recommendations from the JTCB?

b. Did you immediately notify CJTF concerning events which indicated that intel portions of the joint fires plan execution was not occurring as envisioned, and did you recommend and/or take corrective actions?

c. Did you review and modify the intel portions of the joint fires plan and DST to keep pace with the JTF ongoing battle, to support unplanned battlefield events, and to incorporate CJTF decisions?

d. Did you disseminate the CJTF's decisions regarding changes to intel asset utilization to component commands? Did you provide updates to the unified command HQ on a periodic basis?

21. Consolidation and Reorganization. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you obtain reports on status of all target acquisition, EW, and PSYOP assets?

- 1) Report status of assets through the J3 to the unified command HQ?
- 2) Monitor and assist efforts to fix, replace, resupply, and cross level battlefield losses?

b. Did you monitor component target acquisition asset reorganization and redistribution?

c. Did you support J3 Ops conduct of internal after action review (AAR) of joint fires operations and participates in JTF and component AARs?

d. Did you provide input to CJTF for his conduct of AAR of joint fires operations?

e. Have you begun planning for projected future operations or requirements?

APPENDIX D
Joint Force Fires Coordination Element
Joint Fires Responsibilities

1. **Purpose.** This appendix identifies, organizes, and lists in logical sequence all of the Joint Force Fires Coordination Element (JFFC-E) tasks necessary to perform its joint fires responsibilities.

a. The JFFC-E is used to describe the element of the J3 involved in the coordination, synchronization, and integration of joint fires and joint fire support. The Joint Force Fires Coordinator (JFFC) is the senior officer in charge of the JFFC-E. Neither the JFFC nor the JFFC-E are recognized as approved joint terminology. However, a corps commander acting as a CJTF needs a staff element in the headquarters to coordinate with service and functional components concerning the application of joint fires and joint fire support and to keep the CJTF informed. That is the envisioned role of the JFFC and the JFFC-E discussed here.

b. The JFFC-E is usually formed from a combination of personnel from the Deep Operations Coordination Center (DOCC), the Corps Fire Support Element (FSE), the supporting Joint Force Air Component Commander's staff, and the Deployable Joint Task Force Augmentation Cell (DJTFAC) provided by the unified command.

2. Establishment of Joint Task Force (JTF) and Initial Planning.

a. Corps headquarters (HQ) receives the operations order (OPORD) from unified commander establishing the corps as a JTF and assigning mission and joint operations area (JOA).

b. The corps commander organizes the JTF HQ with personnel assigned from the unified command, his headquarters, and the components, and becomes Commander, JTF (CJTF). *[NOTE: Given the unified commander's assessment of the situation, he will ensure that the CJTF is provided the required personnel from his headquarters and other services to fully integrate a joint staff. Such augmentation often includes a deputy from another service.]*

c. JFFC-E assists J3 Plans during initial planning phase in:

1) Determining the conditions required to meet the desired military end state.

[NOTE: The desired military end state will be provided by the unified commander. It is one of the required conditions to achieve the national strategic end state. The two end states are not synonymous.]

2) Determining campaign objectives and tasks required to accomplish them.

3) Determining constraints and restrictions; e.g., rules of engagement, overflight restrictions, political considerations.

4) Reviewing assigned forces to determine adequacy of the force to perform the tasks necessary to accomplish the mission, in order to assess the proper mix of forces and deployment sequence of the JTF.

d. JFFC-E planners participate in meeting of JTF joint planning group (JPG). This meeting is conducted by J3 Plans for component and functional planners in order to begin parallel planning.

e. JFFC-E participates in J2's:

- 1) Orienting intelligence preparation of the battle space (IPB) on the JTF mission.
- 2) Production of initial drafts of CCIR and EEI for JPG discussion.
- 3) Coordinating with the unified command Joint Intelligence Center (JIC) for the following purposes:
 - a) Determination of availability of national and theater RSTA assets.
 - b) Update of intelligence database.

f. JFFC-E provides J3 Plans an initial estimate of what JFFC-E personnel should be in the JTF HQ advance element and what joint fires assets (to include RSTA) should be scheduled into the operational area in what sequence. J3 Plans consolidates this information and passes it to the J4 for him to begin coordination with the unified command for deployment scheduling.

g. JFFC-E initiates joint fires planning.

- 1) The JFFC establishes and oversees the administration of the Joint Targeting Coordination Board (JTCB). An initial meeting will be scheduled to oversee JTF targeting functions and develop broad targeting guidance. *[NOTE: The CJTF may establish and task an organization within his staff to accomplish broad targeting oversight functions or may delegate this function to a subordinate commander. For the purpose of this analysis, it is assumed that the CJTF establishes a JTCB. The JTCB is normally chaired by the deputy CJTF. It will include component representatives, the JFFC, J2 and J3, and other staff representatives as required.]*
- 2) JFFC-E ensures that liaison and communications are established between the component fire planners and from the components to the JTF HQ to facilitate joint fire planning.
- 3) JFFC-E ensures that liaison and communications are established between the JTF HQ and coalition fire planners.

4) JFFC-E obtains from the J2 the target acquisition assets available to the JTF from components and coalition members.

3. Operational Mission Analysis and CJTF's Initial Planning Guidance.

a. JFFC-E participates in J3 Plans supervised analyzing of the mission; all specified and implied tasks required for mission accomplishment are identified.

b. JFFC-E obtains following information from J2 Staff Section:

- 1) Threat forces order of battle.
- 2) Centers of gravity (and related high-payoff targets [HPTs]).
- 3) The nature and characteristics of the JOA and areas of interest. In addition to terrain and weather, this should include information on the local economy, agricultural, unique culture, religion(s), level of technological advancement (first world/third world/combo), minority populations/political organizations, and any other considerations deemed useful.

c. JFFC-E participates with J2, J3, and J6 in the initial planning for command and control warfare (C2W) operations (encompasses OPSEC, PSYOP, EW, deception, and physical destruction of enemy command and control (C2) nodes and other C2W targets).

d. JFFC-E obtains information collected by Civil Affairs Staff Officer concerning locations of refugees; noncombatants; significant historic, cultural and religious structures; and population centers which may restrict delivery of fires and require fire support coordination measures (FSCMs), e.g., no fire areas (NFAs) and restricted fire areas (RFAs).

e. JFFC-E in close coordination with J3 Plans prepares for initial JTCB meeting and:

- 1) Based on the situation and understanding of the mission, drafts targeting guidance and priorities for CJTF approval.
- 2) Based on input from the J2, identifies high-value targets (HVTs) and prepares initial joint target lists (JTLs). *[NOTE: In some cases an initial target list will be provided by the unified command.]*
- 3) Assesses requirements for, and availability of, all target acquisition assets.
- 4) Identifies requirements for and availability of fires means to include CAS, AI, NSF, EW, PSYOP, and armed helicopters (attack, other).

f. JFFC-E monitors the deployment of all joint fires forces. Additionally, JFFC-E, assisted by the J2, monitors the components' positioning of assets to ensure that no gaps exist in supporting capabilities.

g. JFFC provides J3 Plans recommendations for required delivery date of joint fires assets. J3 Plans provides this input to the J4, so that he can work time-phased force deployment data (TPFDD) with the unified command.

h. JFFC-E assists J3 Plans in briefing CJTF on recommendations for CJTF Initial Planning Guidance. Briefing includes:

- 1) Restatement of mission based on operational mission analysis.
- 2) Initial statement of intent to include CJTF vision of tasks to be accomplished to achieve mission requirements, priorities for deployment and positioning of forces, and conditions to be achieved for the desired military end state.
- 3) Recommended CCIR and EEI.
- 4) Force protection measures.
- 5) Guidance for C2W operations.
- 6) Clear statement of intent for the use of fires and component fire support (to include priorities) and delineation of how these assets support the maneuver concept.
- 7) Timelines.

i. JFFC-E assists J3 Plans in preparing message for CJTF to forward to unified commander outlining CJTF's concept of operations, near-, mid-, and long-term objectives; and requirements for theater level support. The J3 Plans, assisted by the JFFC-E, includes joint fires related input and coordinates with JTCB, component commanders, and J2 to identify initial requirements for theater level targeting and weaponeering support; e. g., Tomahawk land attack missile (TLAM) support. *[NOTE: Given the importance of the JFACC in planning and delivering joint fires, it is imperative that he be brought into the fire planning early on, so that the JFFC-E clearly understands his concept of operations to include apportionment recommendations and integrates it into operational planning and course of action (COA) development.]*

4. Developing and Issuing Warning Order.

a. JFFC-E assists J3 Plans in developing the JTF Warning Order. It is approved by the CJTF and is disseminated to all subordinate and supporting units.

b. JFFC-E provides J3 Plans the following information for the Joint Planning Group (JPG) and for the joint fires planners as a part of the JTF warning order. *[NOTE: The CJTF may establish a JPG to serve as a focal point for deliberate planning for the JTF.]*

- 1) Priorities of fires, including joint fires capability required to provide adequate lethality for early deployers.
- 2) Host nation/coalition fire support systems available in the JOA.
- 3) Requirements for positioning of target detection and joint fires assets.
- 4) Fire coordination facilities and mechanisms; e.g., JFACC, JTCCB, deep operations coordination cell (DOCC), battlefield coordination detachment (BCD), joint forces fires coordination element.
- 5) Permissive and restrictive fire control measures.
- 6) Special instructions on ROE, fire support communications, and logistic support.
- 7) Predicted impact of terrain and weather on fires.
- 8) Staging and marshaling areas for fires systems, to include those en route or proximate to the JOA.

5. Preparation of Mission Estimate to Include Development of Courses of Action.

a. JFFC-E representative attends JTCCB meeting to assist in JTCCB's initial development of broad recommendations to JFACC.

b. JFFC-E assists J3 Plans in the estimate process based on restated mission, the CJTF's stated intent, and the factors of METT-T.

c. JFFC-E determines and identifies the availability of all target acquisition and delivery means and provides this data and a recommended deployment sequence and force mix to the JPG in order to assist in COA development.

d. JFFC-E considers all available fire support systems to include target acquisition assets when developing the JPG's joint fires estimate.

e. Upon receipt of proposed COAs from JPG, JFFC-E develops a fire plan for each COA which:

- 1) Supports the CJTF's intent for fires.
- 2) Provides required fires requested to support components' concept(s) of operations and scheme(s) of maneuver in accordance with the CJTF's priorities.
- 3) Positions target acquisition and delivery systems to support the concept of operations. *[NOTE: Positioning of forces, including fires assets, is closely coordinated with the unified command and Department of State to ensure that*

required out-of-JOA country clearances can be obtained to marshal, stage, and overfly as necessary to support JTF operations.]

4) Exploits enemy vulnerabilities and attacks centers of gravity and related high-payoff targets.

5) Ensures coordination, synchronization, and integration of strategic, operational, and tactical fires means.

f. JFFC-E "scrubs" JFACC's joint integrated priority target list (JIPTL) to ensure target priorities are in line with CJTF guidance.

g. JFFC-E coordinates with all concerned to ensure that the JTF components and coalition partners understand each other's concepts of operation(s), priorities for fires, and targeting priorities in order to facilitate coordination of fires and ensure unity of effort.

6. Analysis and Comparison of Courses of Action.

a. JFFC-E participates in the courses of action (COA) comparison process (supervised by J3 Plans), paying particular attention to how well each COA exploits enemy vulnerabilities and attacks centers of gravity and related high-payoff targets.

b. JFFC-E develops a fire plan for each COA and which covers:

1) Recommended targeting guidance and priorities developed by the JTCCB.

2) JFACC recommended air apportionment.

3) Changes in organization for combat and priorities in support of phased maneuver plans.

4) Permissive and restrictive fire support coordination measures.

5) Target-value analysis (TVA) of each COA. Factors influencing such analysis include:

a) Impact on enemy operations and probable responses.

b) Criticality of target as it relates to the success of the friendly mission.

6) Initial high-payoff target list (HPTL).

7) The best locations and times to attack HPTs, identified and expressed as TAls.

8) Detection and attack means for HPTs, to include backup means.

9) Decision points (DPs) or decision timelines (recorded on the DST).

10) Plans for expeditiously attacking both known and unknown time critical targets (TCTs).

11) Positioning and repositioning of all target acquisition assets and delivery systems.

12) Plans for the integration of PSYOP and EW assets.

13) Plans to conduct C2W warfare, including EW against enemy command, control, communications, computers, and intelligence (C⁴I) assets and PSYOP against personnel.

14) Options for the use of CAS, AI, and NSF.

15) Allocation of ground-based fires' assets to support the concept of operations.

16) Integration of movement and displacement of fires assets and units to follow the battle flow.

17) Linkage of BDA assets to the attack of HPTs.

c. J3 Plans compares COAs. During comparison process, JFFC-E participates in the comparison and rating of each course of action in terms of the ability of available joint fires assets to support the CJTF intent.

d. Additional HPTs are developed from the COA comparison process and are added to the JTL.

e. The J3 chooses the course of action that is most supportable from a joint fires perspective and prepares his recommended COA for briefing to the CJTF. Components are informed.

f. JFFC-E assists J3 Plans in briefing JTCCB on the recommended COA and ensures JTCCB reviews JFACC recommendations for apportionment for:

1) Compliance with CJTF intent.

2) Support of components' concepts of operations.

g. JFFC-E assists J3 Plans preparation of briefing by J3 to CJTF on recommended COA. Briefing includes:

1) Description of each COA and including joint fires priorities (RSTA assets, AI, CAS, NSF, artillery, EW, PSYOP, deception operations), apportionment, and desired effects.

2) Rationale for selecting recommended COA.

3) Request for CJTF approval of recommended COA.

h. JFFC-E assists J3 Plans in making any modifications to the COA directed by CJTF and helps ensure that the following occurs:

1) Unified commander is informed of CJTF's decision.

2) Supporting and subordinate fire support commanders are notified regarding CJTF's decision.

3) Joint fires plans are adjusted by the JFACC and components to comply with the CJTF's guidance.

7. Preparation of JTF OPORD/FRAGO.

a. JFFC-E finalizes the joint fires plan, based on component input and coordination, to include preparation of paragraph 3a(2) Fires and the joint fires annex, complete with the JIPTL, protected targets list, joint fires execution matrix, and overlays.

b. JFFC-E obtains JIPTL from the JFACC for validation by the JTCB and approval by the CJTF. Once approved by the CJTF, targets are assigned by the JFACC on the ATO. Targets within component AOs which are not on the JIPTL and ATO are detected, engaged, and assessed by the components' organic and/or supporting fire support systems.

c. JFFC-E writes paragraph 3a(2) Fires which includes the following:

1) Outline of joint fires plan, synchronization, and integration measures to support each phase of the battle.

2) Information relevant to apportionment.

3) Designation of components which have priority of joint fire support by phase.

[NOTE: Priority of fires is given to the maneuver unit by phase based on the CJTF's assessment, in his capacity of CJTF and LCC, of where he wishes to conduct the main effort. Additionally, priority of fires can be given to a particular phase of the battle if the commander determines that maximum fires at that point are critical to the success of the JTF mission.]

4) Designation of priority of use of low-density munitions.

5) Description of times, duration, and desired effects of supporting fires. *[NOTE: Attack guidance is provided to attack system managers via the attack guidance matrix (AGM). The AGM consists of target categories, specific HPTs, known TCTs, times when targets should be attacked, how they should be attacked, and any attack restrictions. It is prepared by the JFFC in consultation with J3 Plans.]*

6) Establishment of priority for requested joint air and naval surface fires.

d. JFFC-E writes the joint fires appendix of Annex C - Operations, with accompanying appendices, target list matrices, and overlays; which reflects:

1) Enemy fire support capabilities including artillery, missiles and rockets, air defense, attack helicopters, tactical air, EW, naval surface fires, and NBC capabilities, as well as target acquisition capabilities.

- 2) Information regarding friendly forces mission and concept of fires, to include joint air and naval forces.
- 3) All fire support resources assigned, attached, and supporting the JTF.
- 4) Joint fires organization for combat, joint fires priorities, and concept for support; apportionment of joint fires.
- 5) Positioning and use of all target acquisition assets and delivery systems. A sensor/attack matrix may be used in order to ensure that all HPTs are acquirable and that a delivery system is available to attack the target.
- 6) JIPTL.
- 7) Instructions for attack of HPTs and time critical targets (TCTs).
- 8) Concept for use of air support (Air Force, naval air, USMC air, and armed helicopters).
- 9) Concept for field artillery support.
- 10) Concept for naval support
 - a) NSF.
 - b) Allocation of ANGLICOs.
- 11) Plans for offensive EW, PSYOP, and other non-lethal means of fires.
- 12) Permissive and restrictive FSCMs.
- 13) Airspace control.
- 14) ROE.
- 15) Rear battle to include allocation of joint fires to the tactical combat force (TCF).
- 16) Deception plan.

e. JFFC-E assists J3 Plans by ensuring the integration of joint fires and joint fires considerations into body and appropriate annexes of the OPOD/FRAGO.

- 1) Task organization.
- 2) Intelligence: Appendix 4 - Targeting.
- 3) Operations:
 - a) Appendix 3 - C2W.
 - b) Appendix 4 - PSYOP.
 - c) Appendix 7 - ROE.
 - d) Appendix 9 - Reconnaissance.
 - e) Appendix 10 - Counter C3.
 - f) Appendix 15 - Counterattack.
 - g) Appendix 17 - Amphibious operations.
 - h) Appendix - Joint fire support.
 - i) Appendix - Synchronization matrix.
 - j) Appendix - Forcible entry operations.
 - k) Appendix 19 - Airspace control plan (ACP).
- 4) Logistics: Appendix 6 - Non-nuclear ammunition.
- 5) Civil affairs.
- 6) Command relationships.
- 7) C3 systems.

- 8) Space operations.
- 9) Force protection.
- 10) Execution checklist.

f. JFFC-E coordinates with the J2 to ensure that the JTF collection plan satisfies BDA requirements.

g. JFFC-E coordinates with service and functional commands to share information and facilitate parallel planning.

8. OPORD/FRAGO Approval.

a. JFFC-E briefs CJTF on the joint fires plan to include:

- 1) Joint fires organization for combat.
- 2) Concept for joint fires within the JOA and joint fire support to component operations.
- 3) Priorities of fires during all phases.
- 4) Apportionment.
- 5) JIPTL.
- 6) All fire control and coordination measures.
- 7) Location, status, and mission of target acquisition and delivery assets.
- 8) Timing of fires.
- 9) Detection and attack of HPTs and TCTs.
- 10) Use of preparatory and counter fires.
- 11) NSF plan.
- 12) Available resources and apportionment to air interdiction and close air support and a description of the component commanders' intents for the use of each.
- 13) Plans for joint air attack (JAAT).
- 14) Essential airspace control measures.
- 15) Potential impact on mission of ROE.
- 16) BDA plan.
- 17) Integration of joint fires with C2W and vice versa.

b. PSYOP officer briefs psychological warfare plan.

c. J6 briefs the EW plan to include air and surface electronic combat operations.

d. J3 Plans briefs the information warfare plan.

e. Subordinate commanders brief-back their understanding of the joint fires and fire support plan and pose questions and issues for refinement.

f. JFFC-E ensures that necessary information from the joint fires plan (e.g., JIPTL and FSCMs) is integrated into the JTF DST.

9. Plan Refinement.

a. JFFC-E actively solicits components' comments and any recommended changes.

b. JFFC-E presents components' comments and recommendations to the JTCCB. JTCCB provides advice to CJTF and guidance to J3.

c. After components' input is received, JFFC-E refines and improves the joint fires plan to accommodate component requirements and meet the CJTF's intent.

d. JFFC-E modifies and refines joint fires plan and target lists as new intelligence is received regarding enemy locations and capabilities, and as status of JTF elements and coalition capabilities changes.

e. JFFC-E develops plan to provide sufficient redundancy to ensure that all HPTs can be attacked if primary acquisition or engagement means are unavailable or rendered unusable.

f. JFFC-E assists J3 Plans in developing force protection measures for all key acquisition and engagement assets.

g. JTF joint fires plan is updated and coordinated with latest deep battle plans. JFFC-E coordinates with the JTF Deep Operation Coordination Center (DOCC) to ensure the integration of organic, supporting, and joint fires in support of JSEAD and the attack of deep targets.

h. Plans for attacks of high value/high-payoff targets are refined to ensure that targets are engaged by the appropriate fire support asset and that damage assessment is conducted as required.

i. Hand off procedures from target detection means to attack systems are refined to engage TCTs.

j. JFFC-E, ensures all fire plans, firing locations, and significant intensities of planned fires are provided to and coordinated with the ACA and the BCD.

k. Plans for support of the rear battle are refined to include allocation of fire support assets to the tactical combat force (TCF).

l. JFFC-E coordinates with Civil Affairs Staff Officer to update locations of refugees and noncombatants, built-up areas, and cultural/religious sites.

m. JFFC-E ensures that changes and refinements to the plan are continuously disseminated to higher, lower, adjacent, and supporting commands.

10. Plan Updates.

a. JFFC-E provides periodic updates regarding modifications and refinements to the joint fires plan.

b. JFFC-E monitors the progress of joint fires preparations and reports/briefs the following, as required, for 72 hours out: *[NOTE: The JFCC-E closely coordinates with and attends briefings given by other members of the JTF staff whose area of interest would affect the joint fires plan (e.g., intelligence, logistics, personnel updates, information warfare, PSYOP, EW, legal [concerning ROE], and civil affairs).]*

- 1) Changes to targeting guidance, priorities, JIPTL.
- 2) Changes to artillery organization for combat.
- 3) Changes in available fires and modification of assigned missions.
- 4) Current location, status, and operations of all joint fires and target acquisition assets (to include SOF and armed helicopters).
- 5) Status of JFACC planning and targeting.
- 6) Changes to apportionments and allocations for CAS, AI, and counterair.
- 7) Refinements to JAAT plans and any changes to JSEAD requirements.
- 8) Changes to plans for the use of EW assets.
- 9) Use of fires in psychological and deception operations. *[NOTE: Use of fires in deception operations will usually be briefed in a separate session due to operational security (OPSEC) requirements.]*
- 10) Changes to FSCMs.

c. JFFC-E informs CJTF, JTF staff, and components of changes.

11. Force Protection Operations and Activities.

a. JFFC-E coordinates with J2 to ensure that information on enemy locations and capabilities including target acquisition and joint fires assets accurately reflects current situation.

b. JFFC-E coordinates with service components to ensure that joint fires and target acquisition assets have been provided adequate priority to assure survivability and force protection.

c. JFFC-E establishes priority of fires for security forces.

d. JFFC-E ensures target acquisition assets and delivery means are positioned to provide long range fires including non-lethal fires for the security force.

e. JFFC-E presents to JTCC recommendations for apportionment of CAS and naval surface fires in support of the security forces.

f. JFFC-E integrates fires assets into the joint force deception plan.

g. JFFC-E assists J3 Plans and C2W officer in integrating fires with C2W.

h. OPSEC measures are developed and planned to avoid detection of the security force locations as well as those of JTF target acquisition and joint fires assets.

i. JFFC-E coordinates with the JTF engineer to plan fire support coverage of operational obstacles.

j. JFFC-E integrates required changes revealed by the JTF rehearsals (obtained from J3 Ops) into the joint fires and components' fire support plans.

k. Additional input from higher, lower, or adjacent fire planners resulting from OPPLAN rehearsals is also incorporated into the joint fires plan.

l. Potential movement or terrain management conflicts that were discovered during rehearsals are resolved.

m. JFFC-E disseminates all refinements and changes to joint fires plan to higher, lower, supporting, and adjacent fire planners.

12. Mission Preparation Phase.

a. JFFC-E records results of JTCC meetings with any modifications requiring refinements to apportionment and the JIPTL provided by the JFACC.

b. JFFC-E monitors the status of joint fires preparations.

1) Status and preparation of component artillery and other fire support assets to support the joint fires plan.

2) Availability of joint air and naval surface fires, electronic warfare assets, PSYOP capabilities, and armed helicopters to support the joint fires plan.

- 3) Preparation and status of target acquisition units and assets.
- 4) Changes to target lists based on updated intelligence.
- 5) Engineer activities.
 - a) Barrier plans.
 - b) Maintenance/preparation of lines of communication (LOCs) and main supply routes (MSRs).
 - c) Preparation of alternate and supplementary firing locations.
 - d) Supplementary survivability measures for critical target acquisition assets.
 - e) Family of scatterable munitions (FASCAM) planning and preparation.
 - f) Preparation or improvement of facilities for use by joint fires elements.
- 6) Changes of location of friendly forces, refugees, or other noncombatants.
- 7) Weather updates.

c. JFFC-E monitors component preparation:

- 1) Ensures that the joint fires plan is refined to reflect changes to subordinate unit maneuver plans.
- 2) Ensures that changes to subordinate unit fire support plans are integrated into the joint fires plan.
- 3) Coordinates with components to adjust FSCMs as required to facilitate delivery of subordinate, adjacent, and joint fires.
- 4) Appraises recommendations to LCC for shifts to the FSCL.
- 5) Monitors availability of joint fires assets to support both tactical and operational fires.
- 6) Monitors the status of joint air and NSF requests and availability of support.
- 7) Monitors recommendations of the JTCB.
- 8) Monitors availability of ammunition and spare joint fires major end items.
- 9) Monitors JFACC preparation of the ATO.
- 10) Ensures that locations of SOF and long range reconnaissance patrols (LRRPs) are known and that the joint fires plan is adjusted to avoid fratricide and to provide joint fire support as required for direct action missions or contingency operations.

d. JFFC facilitates sharing of information between J3 Plans and service and functional commanders. He recommends changes to JTF Decision Support Template (DST).

e. JFFC-E makes necessary changes to JTF DST; recommends changes to plan and FSCL to CJTF.

13. Integration of Joint Targeting.

a. JFFC-E plans and coordinates detailed fire support operations and joint fires.
[NOTE: Joint fires operations may involve the coordinated use of intelligence, artillery, NSF, surface-to-surface rocket and missile artillery, armed helicopters, USAF, USN, USMC, and/or SOF assets to engage the enemy.]

b. JFFC-E identifies requirements and nominates targets to the JFACC that are outside the component boundaries.

c. JFFC-E supports the joint target list development process by providing targets and targeting information to the unified command JIC and the JTF JFACC.

- 1) Unified command provides weaponeering support as required.
- 2) Targets identified by the unified command for JTF attack are provided to the JTF for execution.

d. JFFC-E obtains JFACC developed target lists and reviews them to ensure they support the concept of operations and meet CJTF's intent.

- 1) Target lists provide a description, precise location at time of desired attack, target composition, desired effects, and rationale for engagement. (Requests for close air support are concurrently submitted through the BCD to the air component AOC.)
- 2) JTCCB reviews target lists for consistency with CJTF intent for joint fires, inclusion of unified command and JTF targets, and component requirements.
- 3) After the CJTF receives a recommendation from the JTCCB and makes a decision regarding targeting and apportionment, the JFACC staff plans and executes the missions through the ATO.

e. JFFC-E establishes maneuver control and fire support coordinating measures to facilitate component and joint operations.

f. JFFC-E coordinates rear area joint fire support with the joint rear area coordinator (JRAC) and the commander of the TCF to include identification of restricted fire and NFAs.

14. Planning JTF Command Group and Command Posts Locations.

a. J3 Plans plans the locations of the JTF command group and command posts so they are positioned to support and control the battle. JFFC-E assists by providing its C4I requirements and peculiarities.

b. The Joint Operations Center (JOC) serves as the JTF main command post and is centrally located to best control all JTF operations; normally operates under the

control of the JTF Chief of Staff. The JFFC normally operates as a member of the JOC. The JFFC-E:

- 1) Provides joint fires coordination capability for JTF tactical, main, and rear command posts.
- 2) Maintains communications with all joint fires elements.
- 3) Maintains status of fires assets and continually updates and refines fire plans while providing current information to commander and staff.
- 4) Recommends priorities; coordinates, integrates, and synchronizes available joint fires assets to support current and future operations.

c. The JTF tactical operations center (JTOC) is located well forward where it can best control JTF units in contact; it normally operates under the control of the JTF J3.

d. The joint rear tactical operations center (JRTOC) is located in the joint rear area and is under control of the Joint Rear Area Commander (JRAC). Fires are coordinated by the tactical combat force (TCF) commander through the JRTOC with appropriate component and host nation combat commanders assigned to rear operations.

15. Rehearsal of Operations. *[NOTE: Rehearsals are always conducted, but can range from a full rehearsal to a terrain model, map, or radio back-briefs. At the JTF or land component level, most rehearsals will be in the form of brief backs and will be more general than rehearsals at tactical unit level.]*

a. JFFC-E assists J3 Ops in conducting rehearsal of the operations plan. Joint fires and fire support plans are rehearsed concurrently with the operations plan in order to ensure appropriate synchronization. Includes CAS, NSF, armed helicopters' fire support, PSYOP, EW, and RSTA utilization. *[NOTE: Detailed rehearsal of JAAT and JSEAD is necessary; rehearsals should be accomplished by components with appropriate representation by all participants.]*

b. Rehearsals address strategic, operational, and tactical fires.

c. Rehearsals cover acquisition, observation, timing, attack, and BDA of HPTs. Backup systems should participate in the rehearsals. Rehearsals must include hand-off procedures from acquisition assets to attack systems to engage TCTs.

d. Rehearsals include the positioning and displacement plan for all joint fires and target acquisition assets.

e. Rehearsals include all aspects of collecting information to enable BDA.

f. Rehearsals incorporate measures to prevent fratricide, non-essential collateral damage, and noncombatant casualties; measures include FSCMs, ROE, ACP, and IFF procedures.

- g. Land component's rehearsals include clearance procedures to facilitate firing across boundaries.
- h. Logistics rehearsals include ground and air movement, resupply procedures, and time schedules.
- i. Communication plan rehearsals include communications links between detection systems, the decision maker and delivery systems, as well as positioning and utilization of retransmission sites.
- j. Procedures to update the HPTL and synchronize the AGM and DST as the situation changes are rehearsed.
- k. Required changes revealed by the JTF rehearsals are passed to JFFC-E for integration into the joint fires and components' fire support plans.

16. Coordination with Higher, Adjacent, Supported, and Supporting Elements.

- a. JFFC-E ensures that component liaison officers are knowledgeable and current on all aspects of the joint fires plan. Liaison officers from other headquarters are updated.
- b. JFFC-E receives debriefs on all aspects of joint fires and of component fire support from JTF liaison officers located at component HQs or after their visits to other headquarters.
- c. JFFC-E provides continuous updates for the CJTF and other members of the staff regarding joint fires.
- d. JFFC-E ensures key aspects of the joint fires plan and requirements for theater level joint fires and RSTA assets are included in update briefings to the unified command.

17. Battlefield Visualization.

- a. One of the JFFC-E's main functions is to provide the joint fires information necessary for CJTF to "visualize" the battlefield and for other staff sections to keep abreast of the current and near-term joint fires situation. CJTF will personally observe execution of critical aspects of the operation and will receive direct situation reports from component commanders. However, he must be able to come into the J3 Ops area at any time and receive the most accurate operational information available.
[NOTE: After considering the factors of METT-T, the CJTF adjusts his position on the battlefield to best control and influence fires as well as maneuver and other operations.]

- b. JFFC assists the J2 in:

- 1) Coordinating targeting and damage assessment requirements and locations of RSTA assets with components to ensure unity of effort and synchronization of RSTA operations with fires.

- 2) Providing and constantly updating information to the CJTF regarding the military aspects of the terrain as it relates to joint fires; e.g., elevation, soil density, vegetation, and masking.

- 3) Providing the latest information regarding potential targets of opportunity, as well as enemy vulnerabilities to indirect fires, air-delivered munitions. This will include the status and location of enemy fire support assets and their vulnerability to counter fires.

- 4) Developing BDA and recommending re-targeting as appropriate.

c. JFFC-E considers any JFACC recommended changes to apportionment and the JIPTL, and presents them to JTCB.

d. JFFC-E continually updates and provides the CJTF with the location, disposition, status, and capability of all JTF joint fires assets and the effectiveness of the joint fires plan.

e. JFFC-E, assisted by the J2, continually provides updates to the CJTF regarding the location, status, and disposition of target acquisition assets and recommend changes as appropriate.

f. JFFC-E reports to CJTF any changes to apportionment and JIPTL recommended by the JTCB.

18. Current Battle Activities.

a. Based on what he sees and the information provided to him, CJTF makes appropriate decisions in response to changes in METT-T.

b. JFFC-E:

- 1) Provides responses for new CCIRs related to fires.

- 2) Monitors employment of joint fires IAW the JIPTL and DST.

3) Anticipates other joint fires requirements as changes occur on the battlefield by:

- a) Understanding the respective commanders' intents.
- b) Remaining knowledgeable regarding battlefield events and the flow of the battle.
- c) Following and war gaming the JTF battle through the use of templates.
- d) Continuing the IPB process in coordination with the JTF J2.

c. JFFC-E assist J3 Ops, the J2, and C2W officer, in developing combat assessments (CA) with reattack recommendations. JTCC considers BDA and CA; recommends targeting action or change in targeting action or allocation.

d. In the event that the joint fires do not achieve CJTF's intent due to unanticipated enemy actions or other battlefield events, the JFFC-E conducts accelerated fire planning in coordination with the service and functional component staffs.

- 1) Accelerated fire support planning is based on updated IPB and changes to the JTF OPLAN.
- 2) New targets are identified and incorporated into the JIPTL in order to match targets to available weapons systems. Joint/multinational operational firepower resources are reallocated as necessary.

e. The JFFC-E anticipates LCC needed changes to the location of the FSCL, and coordinates those changes with components and functional commands. If other components disagree with the FSCL location and the issue is not resolved by the JTCC, JFFC-E briefs CJTF for his resolution of the issue.

19. Tracking and Supporting the Battle.

a. JFFC-E coordinates among its sections at JOC, JTOC, and JRTOC to synchronize the targeting effort as it is being executed, and:

- 1) Executes planned fires IAW the JTF plan and the DST.
- 2) Continually coordinates with the JTF staff to ensure that fires adequately support the concept of operations.
- 3) Evaluates fire requests in light of other requirements and joint fires resources available. Provides, denies, or substitutes other joint fires means within the scope of the delegated authority.
- 4) Coordinates attack of targets of opportunity obtained by JTF and supporting target acquisition assets; e.g., UAV, LRSU, sensors, radars, JSTARS, and SOF with the appropriate components.
- 5) Monitors and coordinates execution of AI with the JFACC.
- 6) Processes and coordinates JSEAD and JAAT missions.
- 7) Monitors immediate CAS and NSF requests.

- 8) Ensures that the Airspace Coordination Authority (ACA) is kept current on joint fires and fire support operations.
- 9) Monitors the availability and employment of special munitions; e.g., FASCAM, Search and Destroy Armor Munitions (SADARM), smoke, and illumination as outlined in the joint fires plan.

b. JFFC-E ensures that fires are synchronized and integrated with JTF OPLAN by:

- 1) Performing target analyses.
- 2) Coordinating with subordinate fire support cells to integrate fires with maneuver.
- 3) Coordinating with JTF staff to ensure that CAS, AI, and NSF are integrated into the battle and synchronized with artillery fires, EW, and SOF and armed helicopter operations.
- 4) Coordinating the timing and duration of offensive EW (e.g., jamming) to support JTF maneuver and attacks by lethal systems.

c. JFFC-E continues to track the battle flow through:

- 1) Spot reports and situation reports.
- 2) Interstaff coordination.
- 3) Monitoring communications channels.
- 4) BDA.
- 5) CA.

20. Battlefield Updates (METT-T Based).

a. JFFC-E provides updates on the status of land component field artillery, EW, and target acquisition assets.

b. JFFC-E ensures that JFACC representative, NGLO, and other representatives from the components provide updates regarding status of CAS, AI, and other air assets, and status and availability of NSF and SOF.

c. Updates include:

- 1) CA of previously executed fires.
- 2) Recommendations for re-targeting and re-apportionment of joint fires assets.
- 3) Planned movement of target acquisition and delivery assets with assessment of consequences in terms of availability of fires.
- 4) Types and quantity of munitions available with assessment of consequences in terms of availability of fires.

21. Supporting CJTF Decision Making Process on Operational Actions/Direction Under Time Constraints.

a. The CJTF directs re-targeting, re-apportionment of joint fires assets, or changes to JTF target list based on his own appreciation of the situation, CA, and recommendations from the J3, JFFC, JFACC, component commanders, and the JTCB.

b. Understanding the CJTF's intent, JFFC-E immediately notifies him concerning events which indicate the joint fires plan execution is not occurring as envisioned and recommends and/or takes corrective actions.

c. JFFC-E reviews and modifies the joint fires plan and DST to keep pace with the JTF ongoing battle, to support unplanned battlefield events, and to incorporate CJTF decisions.

d. JFFC-E ensures that JFACC is informed of all changes so that he can modify JIPTL to incorporate CJTF decisions.

e. The CJTF's decisions regarding changes to the fires plan are captured by JFFC-E and are disseminated to component commands. An update is also provided to the unified command HQ on a periodic basis.

22. Consolidation and Reorganization.

a. JFFC-E obtains reports on status of all joint fires assets to include target acquisition, air, naval surface fires, EW, PSYOP, and field artillery assets.

- 1) Reports status of assets through the J3 to the unified command HQ.
- 2) Monitors and assists efforts to fix, replace, resupply, and cross level battlefield joint fires losses.

b. JFFC-E monitors component fire and target acquisition asset reorganization and redistribution.

c. Fires are reprioritized to support consolidation.

d. JFFC-E conducts internal after action review (AAR) of joint fires operations and participates in JTF and component AARs.

e. CJTF conducts AAR of joint fires operations.

f. JTF staff begins planning for projected future operations or requirements.

[NOTE: Future operations could include transition to another command, continuation of combat, commencement of peacekeeping, humanitarian assistance, or redeployment, and disestablishment of the JTF depending on the situation and guidance from the unified commander.]

Self-Assessment Tools for Joint Force Fires Coordination Element's Mini-AARs

1. Self-Assessment and Feedback.

a. One of the major challenges to assessing training performance and giving meaningful feedback in the joint arena is finding the right people with the right expertise to conduct the assessment. At lower echelons, those personnel can be found in like units or in higher echelon units and can be tasked to perform assessment and feedback for other units' training. But for a joint task force at the corps level, it is often times impractical to task like or higher units for personnel. Additionally, during actual combat or for training at times other than during a major joint exercise, expert observers/controllers/trainers will not be present to provide necessary feedback. So where does one find the required expertise? It can be found among the corps JTF's own staff personnel. Therefore, the training performance measures and feedback methods contained in this guide were designed for **self**-assessment by personnel in those JTF staff sections involved with joint fires operations.

b. Many of the tasks performed by the JTF staff in joint fires operations are process oriented, as opposed to outcome oriented. To perform the processes involves, to a large degree, the performance of military "art" based on collective judgment. This is something difficult to measure *objectively*. It was, therefore, necessary to derive mainly *subjective* performance measurement tools.

c. The Self-Assessment Tools are to be used by the chief of each key JTF staff section to conduct a 10-15 minute mini-AAR (after action review) for his section at the conclusion of each iteration or phase of its joint fires processes. This allows him to give and receive feedback on how well the process was performed and on what needs to be fixed or improved for the next iteration. The Self-Assessment Tools:

- 1) Provide a reminder and a format to conduct on-going, semi-structured reviews of what's being done, for what purpose, and how well it's being done.
- 2) Provide a record of performance progress throughout the duration of a training exercise or during actual combat.
- 3) Provide a record of lessons learned for inclusion into the overall JTF Joint Fires AAR.
- 4) Identify tasks which require additional training or need added emphasis in future training exercises.

d. The Self-Assessment Tools for the Joint Force Fires Coordination Element are in the form of questions for the JFFC to ask himself and the members of his element. They are arranged in general categories representing the sequence in which tasks are

performed. A mini-AAR should be performed at the conclusion of each of the following phases.

2. Establishment of Joint Task Force and Initial Planning. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

- a. How well was the staff section organized and how well did they work together?
- b. Have all relevant inputs from higher, adjacent, and lower headquarters been collected? Are they understandable and do they make operational sense? If not, has clarification been sought? From where?
- d. Did you evaluate the "Fires" annexes of existing OPLANs and CONPLANs related to this mission?
- e. Did you evaluate the "Fires" portions of the unified command's OPORD?
- f. Did you determine the conditions required to meet the unified commander's desired end state as they relate to joint fires operations?
- g. Did you determine mission objectives and tasks required to accomplish them?
- h. Did you determine constraints and restrictions; e.g., rules of engagement, overflight restrictions, political considerations?
- i. Did you review assigned forces to determine adequacy of the force to perform the tasks necessary to accomplish the mission? Did you assess the proper mix of forces and deployment sequence of the JTF?
- j. Did you actively participate in the IPB process with the J2 staff section?
- k. Did you provide J3 Plans an initial estimate of what JFFC-E personnel should be in the JTF HQ advance element and what joint fires assets (to include RSTA) should be scheduled into the operational area in what sequence?
- l. Did you ensure that liaison and communications were established between the component fire planners and from the components to the JTF HQ to facilitate joint fire planning?

m. Did you ensure that liaison and communications were established between the JTF HQ and coalition fire planners.

n. Did you obtain from the J2 the target acquisition assets available to the JTF from components and coalition members?

3. Operational Mission Analysis and CJTF's Initial Planning Guidance. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well?"]*

a. Did you identify for J3 Plans all specified and implied tasks concerning joint fires and joint fire support operations required for mission accomplishment?

b. Did you obtain J2 Staff Section and consider in your joint fires mission analysis:

- 1) Threat forces order of battle?
- 2) Centers of gravity (and related high-payoff targets [HPTs])?
- 3) The nature and characteristics of the JOA and areas of interest?

c. Did you participate with J2, J3, and J6 in the initial planning for command and control warfare (C2W) operations (encompasses OPSEC, PSYOP, EW, deception, and physical destruction of enemy command and control (C2) nodes and other C2W targets)?

d. Did you obtain information collected by Civil Affairs Staff Officer concerning locations of refugees; noncombatants; significant historic, cultural and religious structures; and population centers? Did you develop initial restrictive fire support coordination measures (FSCMs) (e.g., no fire areas (NFAs) and restricted fire areas (RFAs)) to protect them?

e. Did you assist J3 Plans in preparing for the initial JTCB meeting by:

- 1) Drafting targeting guidance and priorities for CJTF approval, based on the situation and understanding of the mission?
- 2) Identifying high-value targets (HVTs) and preparing initial joint target lists (JTLs)? Was an initial target list provided by the unified command?
- 3) Assessing requirements for, and availability of, all target acquisition assets?
- 4) Identifying requirements for and availability of fires means to include CAS, AI, NSF, EW, PSYOP, and armed helicopters?

f. Have you been monitoring the deployment of all joint fires forces and the positioning of components' assets to ensure that no gaps exist in supporting capabilities?

g. Have you provided J3 Plans your recommendations for required delivery date of joint fires assets? Have you checked this input with the J4 to ensure it is included in his time-phased force deployment data (TPFDD) submitted to the unified command?

h. Did you brief CJTF on recommendations for the joint fires portions of his Initial Planning Guidance? Did your briefing include a clear statement of intent for the use of fires and component fire support (to include priorities) and a delineation of how these assets support the maneuver concept?

i. Have you brought the JFACC into your fire planning? Do you have a clear understanding of his concept of operations to include apportionment recommendations and so you can integrate it into operational planning and course of action (COA) development?

j. Did you identify initial requirements for theater level targeting and weaponeering support; e. g., Tomahawk land attack missile (TLAM) support?

4. Developing and Issuing Warning Order. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you provide J3 Plans the following information for the Joint Planning Group (JPG)?

- 1) Priorities of fires, including joint fires capability required to provide adequate lethality for early deployers?
- 2) Host nation/coalition fire support systems available in the JOA?
- 3) Requirements for positioning of target detection and joint fires assets?
- 4) Fire coordination facilities and mechanisms; e.g., JFACC, JTCCB, deep operations coordination cell (DOCC), battlefield coordination detachment (BCD), joint forces fires coordination element?
- 5) Permissive and restrictive fire control measures?
- 6) Special instructions on ROE, fire support communications, and logistic support?
- 7) Predicted impact of terrain and weather on fires?
- 8) Staging and marshaling areas for fires systems, to include those en route or proximate to the JOA?

b. Was this information passed to subordinate joint fires planners as a part of the JTF warning order?

5. Preparation of Mission Estimate to Include Development of Courses of Action.

Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you provide assistance to JTCCB members for their JTCCB's initial development of broad recommendations to the JFACC?

b. Did you assist J3 Plans in the estimate process based on restated mission, the CJTF's stated intent, and the factors of METT-T.

c. Did you determine and identify the availability of all target acquisition and delivery means? Did you provide this data and a recommended deployment sequence and force mix to the JPG in order to assist in COA development?

d. Have you considered all available fire support systems to include target acquisition assets when developing the JPG's joint fires estimate?

e. Did you develop a fire plan for each COA which:

- 1) Supports the CJTF's intent for fires?
- 2) Provides required fires requested to support components' concept(s) of operations and scheme(s) of maneuver in accordance with the CJTF's priorities?
- 3) Positions target acquisition and delivery systems to support the concept of operations?
- 4) Exploits enemy vulnerabilities and attacks centers of gravity and related high-payoff targets?
- 5) Ensures coordination, synchronization, and integration of strategic, operational, and tactical fires means?

f. Did you coordinate with the unified command to obtain out-of-JOA country clearances necessary to marshal, stage, and overfly for each COOA?

g. Did you "scrub" the JFACC's joint integrated priority target list (JIPTL) to ensure target priorities are in line with CJTF guidance?

h. Have you coordinated with all concerned to ensure that the JTF components and coalition partners understand each other's concepts of operation(s), priorities for fires, and targeting priorities in order to facilitate coordination of fires and ensure unity of effort?

6. Analysis and Comparison of Courses of Action. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. During the courses of action (COA) comparison process (supervised by J3 Plans), analyze each COA in regards to how well it exploits enemy vulnerabilities and attacks centers of gravity and related high-payoff targets?

b. Did you develop a fire plan for each COA and which covered:

- 1) Recommended targeting guidance and priorities developed by the JTCB?
- 2) JFACC recommended air apportionment?
- 3) Changes in organization for combat and priorities in support of phased maneuver plans?
- 4) Permissive and restrictive fire support coordination measures?
- 5) Target-value analysis (TVA) of each COA? Did the factors influencing your analysis include:
 - a) Impact on enemy operations and probable responses?
 - b) Criticality of target as it relates to the success of the friendly mission?
- 6) Initial high-payoff target list (HPTL)?
- 7) The best locations and times to attack HPTs, identified and expressed as TAIs?
- 8) Detection and attack means for HPTs, to include backup means?
- 9) Decision points (DPs) or decision timelines (recorded on the DST)?
- 10) Plans for expeditiously attacking both known and unknown time critical targets (TCTs)?
- 11) Positioning and repositioning of all target acquisition assets and delivery systems?
- 12) Plans for the integration of PSYOP and EW assets?
- 13) Plans to conduct C2W warfare, including EW against enemy command, control, communications, computers, and intelligence (C⁴I) assets and PSYOP against personnel?
- 14) Options for the use of CAS, AI, and NSF?
- 15) Allocation of ground-based fires' assets to support the concept of operations?
- 16) Integration of movement and displacement of fires assets and units to follow the battle flow?
- 17) Linkage of BDA assets to the attack of HPTs?

c. During the COA comparison process, did you rate of each course of action in terms of the ability of available joint fires assets to support the CJTF intent.?

d. Did you add to the JTL those additional HPTs developed during the COA comparison process?

e. Did you brief the JTCB on the recommended COA and assist in JTCB review of JFACC recommendations for apportionment for compliance with CJTF intent and for support of components' concepts of operations?

f. Did you prepare the fires portions of the briefing given by J3 to CJTF on recommended COA? Did those portions include:

- 1) A joint fires description of each COA and including joint fires priorities (RSTA assets, AI, CAS, NSF, artillery, EW, PSYOP, deception operations), apportionment, and desired effects?
- 2) A joint fires rationale for selecting recommended COA?

g. Did you modify the COA as directed by CJTF and help ensure that the following occurred:

- 1) Supporting and subordinate fire support commanders were notified regarding CJTF's decision?
- 2) Joint fires plans were adjusted by the JFACC and components to comply with the CJTF's guidance?

7. Preparation of JTF OPORD/FRAGO. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you finalize the joint fires plan, based on component input and coordination, to include preparation of paragraph 3a(2) Fires and the joint fires annex, complete with the JIPTL, protected targets list, joint fires execution matrix, and overlays?

b. Did you obtain JIPTL from the JFACC for validation by the JTCB and approval by the CJTF?

c. Did you write paragraph 3a(2) Fires? Did it include the following:

- 1) Outline of joint fires plan, synchronization, and integration measures to support each phase of the battle?
- 2) Information relevant to apportionment?
- 3) Designation of components which have priority of joint fire support by phase.?
- 4) Designation of priority of use of low-density munitions?
- 5) Description of times, duration, and desired effects of supporting fires?
- 6) Did you provide attack guidance to attack system managers via the attack guidance matrix (AGM)? Does the AGM provide the necessary target

categories, specific HPTs, known TCTs, times when targets should be attacked, how they should be attacked, and any attack restrictions?

7) Establishment of priority for requested joint air and naval surface fires?

d. Did you write the joint fires appendix of Annex C - Operations, with accompanying appendices, target list matrices, and overlays? Does it reflect:

- 1) Enemy fire support capabilities including artillery, missiles and rockets, air defense, attack helicopters, tactical air, EW, naval surface fires, and NBC capabilities, as well as target acquisition capabilities?
- 2) Information regarding friendly forces mission and concept of fires, to include joint air and naval forces?
- 3) All fire support resources assigned, attached, and supporting the JTF?
- 4) Joint fires organization for combat, joint fires priorities, and concept for support; apportionment of joint fires?
- 5) Positioning and use of all target acquisition assets and delivery systems?
Was a sensor/attack matrix used in order to ensure that all HPTs are acquirable and that a delivery system is available to attack the target?
- 6) JIPTL?
- 7) Instructions for attack of HPTs and time critical targets (TCTs)?
- 8) Concept for use of air support (Air Force, naval air, USMC air, and armed helicopters)?
- 9) Concept for field artillery support?
- 10) Concept for naval support?
 - a) NSF?
 - b) Allocation of ANGLICOs?
- 11) Plans for offensive EW, PSYOP, and other non-lethal means of fires?
- 12) Permissive and restrictive FSCMs?
- 13) Airspace control?
- 14) ROE?
- 15) Rear battle to include allocation of joint fires to the tactical combat force (TCF)?
- 16) Deception plan?

e. Are joint fires and joint fires considerations integrated into the following sections of the body of and the appropriate annexes of the OPOD/FRAGO?

- 1) Task organization?
- 2) Intelligence: Appendix 4 - Targeting?

- 3) Operations?
 - a) Appendix 3 - C2W?
 - b) Appendix 4 - PSYOP?
 - c) Appendix 7 - ROE?
 - d) Appendix 9 - Reconnaissance?
 - e) Appendix 10 - Counter C3?
 - f) Appendix 15 - Counterattack?
 - g) Appendix 17 - Amphibious operations?
 - h) Appendix - Joint fire support?
 - i) Appendix - Synchronization matrix?
 - j) Appendix - Forcible entry operations?
 - k) Appendix 19 - Airspace control plan (ACP)?
- 4) Logistics: Appendix 6 - Non-nuclear ammunition?
- 5) Civil affairs?
- 6) Command relationships?
- 7) C3 systems?
- 8) Space operations?
- 9) Force protection?
- 10) Execution checklist?

f. Have you coordinated with the J2 to ensure that the JTF collection plan satisfies BDA requirements?

g. During this process did you coordinate with service and functional commands to share information and facilitate parallel planning?

8. OPORD/FRAGO Approval. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did your briefing to CJTF on the joint fires plan include:

- 1) Joint fires organization for combat?
- 2) Concept for joint fires within the JOA and joint fire support to component operations?
- 3) Priorities of fires during all phases?
- 4) Apportionment?
- 5) JIPTL?
- 6) All fire control and coordination measures?
- 7) Location, status, and mission of target acquisition and delivery assets?
- 8) Timing of fires?
- 9) Detection and attack of HPTs and TCTs?
- 10) Use of preparatory and counter fires?
- 11) NSF plan?

12) Available resources and apportionment to air interdiction and close air support and a description of the component commanders' intents for the use of each?

13) Plans for joint air attack (JAAT)?

14) Essential airspace control measures?

15) Potential impact on mission of ROE?

16) BDA plan?

17) Integration of joint fires with C2W and vice versa?

b. Did you modify above based on any CJTF decisions?

c. Did you consider subordinate commanders brief-backs of their understanding of the joint fires and fire support plan? Did you refine plan based on their concerns?

d. Did you integrate the necessary information from the joint fires plan (e.g., JIPTL and FSCMs) into the JTF DST?

9. Plan Refinement. Questions to ask yourself and your staff section members:

[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]

a. Have you actively solicited components' comments and any recommended changes?

b. Did you present components' comments and recommendations to the JTCB?

c. Did you refine and improve the joint fires plan to accommodate component requirements and meet the CJTF's intent? Were any component request denied? Why?

d. Did you modify and refine joint fires plan and target lists as new intelligence was received regarding enemy locations and capabilities, and as status of JTF elements and coalition capabilities changed?

e. Did you develop a plan to provide sufficient redundancy to ensure that all HPTs can be attacked if primary acquisition or engagement means are unavailable or rendered unusable?

f. Did you assist J3 Plans in developing force protection measures for all key acquisition and engagement assets?

g. Did you update and coordinate the JTF joint fires plan with the latest deep battle plans? Did you coordinate with the JTF Deep Operation Coordination Center (DOCC) to ensure the integration of organic, supporting, and joint fires in support of JSEAD and the attack of deep targets?

h. Did you refine plans for attacks of high value/high-payoff targets to ensure that targets will be engaged by the appropriate fire support asset and that damage assessment will be conducted as required?

i. Have hand-off procedures from target detection means to attack systems been refined to engage TCTs?

j. Have all fire plans, firing locations, and significant intensities of planned fires been provided to and coordinated with the ACA and the BCD?

k. Have plans for support of the rear battle been refined to include allocation of fire support assets to the tactical combat force (TCF)?

l. Did you coordinate with Civil Affairs Staff Officer to update locations of refugees and noncombatants, built-up areas, and cultural/religious sites? Did you ensure that these are adequately protected by restrictive FSCM?

m. Did you ensure that changes and refinements to the plan were continuously disseminated to higher, lower, adjacent, and supporting fires elements?

10. Plan Updates. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you provide periodic updates regarding modifications and refinements to the joint fires plan?

b. Did you monitor the progress of joint fires preparations. Did you report/brief the following, as required, for 72 hours out:

- 1) Changes to targeting guidance, priorities, JIPTL?
- 2) Changes to artillery organization for combat?
- 3) Changes in available fires and modification of assigned missions?
- 4) Current location, status, and operations of all joint fires and target acquisition assets (to include SOF and armed helicopters)?
- 5) Status of JFACC planning and targeting?
- 6) Changes to apportionments and allocations for CAS, AI, and counterair?
- 7) Refinements to JAAT plans and any changes to JSEAD requirements?
- 8) Changes to plans for the use of EW assets?

9) Use of fires in psychological and deception operations? Was use of fires in deception operations briefed in a separate session due to operational security (OPSEC) requirements?

10) Changes to FSCMs?

c. Did you coordinate with and attend briefings given by other members of the JTF staff whose area of interest would affect the joint fires plan (e.g., intelligence, logistics, personnel updates, information warfare, PSYOP, EW, legal [concerning ROE], and civil affairs)?

d. Did you inform CJTF, JTF staff, and components of changes?

11. Force Protection Operations and Activities. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you coordinate with J2 to ensure that information on enemy locations and capabilities including target acquisition and joint fires assets accurately reflects current situation?

b. Did you coordinate with service components to ensure that joint fires and target acquisition assets have been provided adequate priority to assure survivability and force protection?

c. Did you establish priority of fires for security forces?

d. Did you ensure target acquisition assets and delivery means are positioned to provide long range fires including non-lethal fires for the security force?

e. Did you present to JTCB recommendations for apportionment of CAS and naval surface fires in support of the security forces?

f. Did you integrate fires assets into the joint force deception plan?

g. Did you assist J3 Plans and C2W officer in integrating fires with C2W?

h. Were OPSEC measures developed and planned to avoid detection of the security force locations as well as those of JTF target acquisition and joint fires assets?

i. Did you coordinate with the JTF engineer to plan fire support coverage of operational obstacles?

j. Did you integrate required changes revealed by the JTF rehearsals (obtained from J3 Ops) into the joint fires and components' fire support plans?

k. Did you incorporate any additional input from higher, lower, or adjacent fire planners resulting from OPPLAN rehearsals into the joint fires plan?

l. Did you resolve any potential movement or terrain management conflicts that were discovered during rehearsals?

m. Did you disseminate all refinements and changes to joint fires plan to higher, lower, supporting, and adjacent joint fires and joint fire support planners?

12. Mission Preparation Phase. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you record results of JTCB meetings with any modifications requiring refinements to apportionment and the JIPTL provided by the JFACC?

b. Did you monitor the status of joint fires preparations:

- 1) Status and preparation of component artillery and other fire support assets to support the joint fires plan?
- 2) Availability of joint air and naval surface fires, electronic warfare assets, PSYOP capabilities, and armed helicopters to support the joint fires plan?
- 3) Preparation and status of target acquisition units and assets?
- 4) Changes to target lists based on updated intelligence?
- 5) Engineer activities:
 - a) Barrier plans?
 - b) Maintenance/preparation of lines of communication (LOCs) and main supply routes (MSRs)?
 - c) Preparation of alternate and supplementary firing locations?
 - d) Supplementary survivability measures for critical target acquisition assets?
 - e) Family of scatterable munitions (FASCAM) planning and preparation?
 - f) Preparation or improvement of facilities for use by joint fires elements?
- 6) Changes of location of friendly forces, refugees, or other noncombatants?
- 7) Weather updates?

c. Did you monitor component preparation:

- 1) Ensure that the joint fires plan is refined to reflect changes to subordinate unit maneuver plans?
- 2) Ensure that changes to subordinate unit fire support plans are integrated into the joint fires plan?
- 3) Coordinate with components to adjust FSCMs as required to facilitate delivery of subordinate, adjacent, and joint fires?
- 4) Appraise recommendations to LCC for shifts to the FSCL?

- 5) Monitor availability of joint fires assets to support both tactical and operational fires?
- 6) Monitor the status of joint air and NSF requests and availability of support?
- 7) Monitor recommendations of the JTCCB?
- 8) Monitor availability of ammunition and spare joint fires major end items?
- 9) Monitor JFACC preparation of the ATO?
- 10) Ensure that locations of SOF and long range reconnaissance patrols (LRRPs) are known and that the joint fires plan is adjusted to avoid fratricide and to provide joint fire support as required for direct action missions or contingency operations?

d. Did you facilitate sharing of information between J3 Plans and service and functional commanders? Did you recommend changes to JTF Decision Support Template (DST)?

e. Did you make necessary changes to JTF DST; recommend changes to plan and FSCL to CJTF?

13. Integration of Joint Targeting. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you plan and coordinate detailed fire support operations and joint fires? In other words did you coordinate the use of intelligence, artillery, NSF, surface-to-surface rocket and missile artillery, armed helicopters, USAF, USN, USMC, and/or SOF assets to engage the enemy?

b. Did you identify requirements and nominate targets to the JFACC that are outside the component boundaries?

c. Did you support the joint target list development process by providing targets and targeting information to the unified command JIC and the JTF JFACC? Did the unified command provide weaponeering support as required? Did the unified command identify targets to the JTF execution?

d. Did you obtain JFACC developed target lists and review them to ensure they support the concept of operations and meet CJTF's intent? Did the target lists provide a description, precise location at time of desired attack, target composition, desired effects, and rationale for engagement? Were requests for close air support concurrently submitted through the BCD to the air component AOC? Did the JTCCB review target lists for consistency with CJTF intent for joint fires, inclusion of unified command and JTF targets, and component requirements? After the CJTF received the recommendation from the JTCCB and made a decision regarding targeting and apportionment, did you monitor the JFACC staff's planing and execution of the missions through the ATO?

e. Did you establish maneuver control and fire support coordinating measures to facilitate component and joint operations?

f. Did you coordinate rear area joint fire support with the joint rear area coordinator (JRAC) and the commander of the TCF to include identification of restricted fire areas and NFAs?

14. Planning JTF Command Group and Command Posts Locations. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you assist J3 Plans in planning the locations of the JTF command group and command posts so they are positioned to support and control the battle by providing joint fires C4I requirements and peculiarities?

b. Did you:

- 1) Provide joint fires coordination capability for JTF tactical, main, and rear command posts?
- 2) Maintain communications with all joint fires elements?
- 3) Maintain status of fires assets and continually update and refine fire plans while providing current information to commander and staff?
- 4) Recommend priorities; coordinate, integrate, and synchronize available joint fires assets to support current and future operations?

15. Rehearsal of Operations. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you assist J3 Ops in conducting rehearsal of the operations plan? Were joint fires and fire support plans rehearsed concurrently with the operations plan in order to ensure appropriate synchronization? Did the rehearsal include CAS, NSF, armed helicopters' fire support, PSYOP, EW, and RSTA utilization?

b. Did rehearsals address strategic, operational, and tactical fires?

c. Did rehearsals cover acquisition, observation, timing, attack, and BDA of HPTs? Did backup systems participate in the rehearsals? Did rehearsals include hand-off procedures from acquisition assets to attack systems to engage TCTs?

d. Did rehearsals include the positioning and displacement plan for all joint fires and target acquisition assets?

- e. Did rehearsals include all aspects of collecting information to enable BDA?
- f. Did rehearsals incorporate measures to prevent fratricide, non-essential collateral damage, and noncombatant casualties; measures include FSCMs, ROE, ACP, and IFF procedures?
- g. Did land component's rehearsals include clearance procedures to facilitate firing across boundaries?
- h. Did logistics rehearsals include ground and air movement, resupply procedures, and time schedules?
- i. Did communication plan rehearsals include communications links between detection systems, the decision maker and delivery systems, as well as positioning and utilization of retransmission sites?
- j. Were procedures to update the HPTL and synchronize the AGM and DST as the situation changes rehearsed?
- k. Did you integrate into the joint fires and components' fire support plans any required changes revealed by the JTF rehearsals?

16. Coordination with Higher, Adjacent, Supported, and Supporting Elements.

Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

- a. Did you ensure that component liaison officers are knowledgeable and current on all aspects of the joint fires plan? Did you ensure that liaison officers from other headquarters are updated?
- b. Did you receive debriefs on all aspects of joint fires and of component fire support from JTF liaison officers located at component HQs or after their visits to other headquarters?
- c. Did you provide continuous updates for the CJTF and other members of the staff regarding joint fires?
- d. Did you ensure key aspects of the joint fires plan and requirements for theater level joint fires and RSTA assets were included in update briefings to the unified command?

17. Battlefield Visualization. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you provide the joint fires information necessary for CJTF to “visualize” the battlefield and for other staff sections to keep abreast of the current and near-term joint fires situation?

b. Did you assist the J2 in:

1) Coordinating targeting and damage assessment requirements and locations of RSTA assets with components to ensure unity of effort and synchronization of RSTA operations with fires?

2) Providing and constantly updating information to the CJTF regarding the military aspects of the terrain as it relates to joint fires; e.g., elevation, soil density, vegetation, and masking?

3) Providing the latest information regarding potential targets of opportunity, as well as enemy vulnerabilities to indirect fires, air-delivered munitions? Did this include the status and location of enemy fire support assets and their vulnerability to counter fires?

4) Developing BDA and recommending re-targeting as appropriate?

c. Did you consider any JFACC recommended changes to apportionment and the JIPTL, and present them to JTCB?

d. Did you continually update and provide the CJTF with the location, disposition, status, and capability of all JTF joint fires assets and the effectiveness of the joint fires plan?

e. Did you continually provide updates to the CJTF regarding the location, status, and disposition of target acquisition assets and recommend changes as appropriate?

f. Did you report to CJTF any changes to apportionment and JIPTL recommended by the JTCB?

18. Current Battle Activities. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you:

- 1) Provide responses for new CCIRs related to fires?
- 2) Monitor employment of joint fires IAW the JIPTL and DST?
- 3) Anticipate other joint fires requirements as changes occur on the battlefield by:
 - a) Understanding the respective commanders' intents?
 - b) Remaining knowledgeable regarding battlefield events and the flow of the battle?
 - c) Following and war gaming the JTF battle through the use of templates?
 - d) Continuing the IPB process in coordination with the JTF J2?

b. Did you assist J3 Ops, the J2, and C2W officer, in developing combat assessments (CA) with reattack recommendations? Did the JTCB consider BDA and CA and recommend targeting action or change in targeting action or allocation?

c. When joint fires did not achieve CJTF's intent due to unanticipated enemy actions or other battlefield events, did you conduct accelerated fire planning in coordination with the service and functional component staffs?

- 1) Was accelerated fire support planning based on updated IPB and changes to the JTF OPLAN?
- 2) Were new targets identified and incorporated into the JIPTL in order to match targets to available weapons systems? Were joint/multinational operational firepower resources reallocated as necessary?

d. Did you anticipate LCC needed changes to the location of the FSCL, and coordinate those changes with components and functional commands? If other components disagreed with the FSCL location and the issue was not resolved by the JTCB, did you brief CJTF for his resolution of the issue?

19. Tracking and Supporting the Battle. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you coordinate among the JFFC-E sections at JOC, JTOC, and JRTOC to synchronize the targeting effort as it is being executed, and:

- 1) Execute planned fires IAW the JTF plan and the DST?
- 2) Continually coordinate with the JTF staff to ensure that fires adequately support the concept of operations?

- 3) Evaluate fire requests in light of other requirements and joint fires resources available? Provide, deny, or substitute other joint fires means within the scope of the delegated authority?
- 4) Coordinate attack of targets of opportunity obtained by JTF and supporting target acquisition assets; e.g., UAV, LRSU, sensors, radars, JSTARS, and SOF with the appropriate components?
- 5) Monitor and coordinate execution of AI with the JFACC?
- 6) Process and coordinate JSEAD and JAAT missions?
- 7) Monitor immediate CAS and NSF requests?
- 8) Ensure that the Airspace Coordination Authority (ACA) is kept current on joint fires and fire support operations?
- 9) Monitor the availability and employment of special munitions; e.g., FASCAM, Search and Destroy Armor Munitions (SADARM), smoke, and illumination as outlined in the joint fires plan?

b. Did you ensure that fires are synchronized and integrated with JTF OPLAN by:

- 1) Performing target analyses?
- 2) Coordinating with subordinate fire support cells to integrate fires with maneuver?
- 3) Coordinating with JTF staff to ensure that CAS, AI, and NSF are integrated into the battle and synchronized with artillery fires, EW, and SOF and armed helicopter operations?
- 4) Coordinating the timing and duration of offensive EW (e.g., jamming) to support JTF maneuver and attacks by lethal systems?

c. Did you continue to track the battle flow through:

- 1) Spot reports and situation reports?
- 2) Interstaff coordination?
- 3) Monitoring communications channels?
- 4) BDA?
- 5) CA?

20. Battlefield Updates (METT-T Based). Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you provide updates on the status of land component field artillery, EW, and target acquisition assets?

b. Did you ensure that JFACC representative, NGLO, and other representatives from the components provided updates regarding status of CAS, AI, and other air assets, and status and availability of NSF and SOF?

c. Did updates include:

- 1) CA of previously executed fires?
- 2) Recommendations for re-targeting and re-apportionment of joint fires assets?
- 3) Planned movement of target acquisition and delivery assets with assessment of consequences in terms of availability of fires?
- 4) Types and quantity of munitions available with assessment of consequences in terms of availability of fires?

21. Supporting CJTF Decision Making Process on Operational Actions/Direction Under Time Constraints. Questions to ask yourself and your staff section members:

[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]

a. Did you recommend re-targeting, re-apportionment of joint fires assets, or changes to JTF target list to CJTF? What were recommendations based upon? Were they valid?

b. Did you immediately notify CJTF concerning events which indicated the joint fires plan execution was not occurring as envisioned. Did you recommend and/or take corrective actions?

c. Did you review and modify the joint fires plan and DST to keep pace with the JTF ongoing battle, to support unplanned battlefield events, and to incorporate CJTF decisions?

d. Did you ensure that JFACC was informed of all changes so that he could modify JIPTL to incorporate CJTF decisions?

e. Did you capture CJTF's decisions regarding changes to the fires plan and disseminate them to component commands? Did you provide an update to the unified command HQ on a periodic basis?

22. Consolidation and Reorganization. Questions to ask yourself and your staff section members: *[Note: Most of these questions can be answered "yes" or "no." If the answer is "yes," then the next question should be "how well."]*

a. Did you obtain reports on status of all joint fires assets to include target acquisition, air, naval surface fires, EW, PSYOP, and field artillery assets? Did you:

- 1) Report status of assets through the J3 to the unified command HQ?
- 2) Monitor and assist efforts to fix, replace, resupply, and cross level battlefield joint fires losses?

b. Did you monitor component fire and target acquisition asset reorganization and redistribution?

c. Did you re-prioritize fires to support consolidation?

d. Did you conduct internal after action review (AAR) of joint fires operations and participate in JTF and component AARs?

e. CJTF conducts AAR of joint fires operations?

f. Have you begun planning for projected future operations or requirements?

APPENDIX E

Self-Assessment Tools for Overall JTF Joint Fires AAR

1. **Purpose.** Whether in actual combat or during training exercises, the JTF staff must plan and conduct joint fires operations. Upon completion of those operations, they also need to conduct a joint fires after action review (AAR) to determine what it was that they actual did and how well they did it. Most of the joint fires tasks they accomplish are process oriented, as opposed to outcome oriented. To perform the processes involves, to a large degree, the performance of military "art" based on collective judgement. This is something difficult to measure *objectively*. It was, therefore, necessary to derive mainly *subjective* performance measurement tools. This appendix provides those tools.

2. **Responsibilities.** The JTF J3 is responsible for conducting the JTF Joint Fires AAR. Usually, the J3 Plans Section is the staff element tasked to support him in that responsibility. Each of the key staff sections involved in joint fires operations is responsible for providing input and lessons learned based on their own mini-AARs.

3. **Training Objective, Task and Standards.** The overall JTF joint fires training objective, its task and standards should be addressed up front during the conduct of the AAR. For convenience, they are restated below.

a. The overall JTF joint fires training objective is: To train key sections of the corps JTF staff in planning and conducting joint fires operations.

b. The overall task for this training objective is: To coordinate, synchronize, and integrate all joint fires and joint fire support operations for the JTF in support of the commander's concept of operations and intent, maximizing mission accomplishment while minimizing risk to friendly forces, neutrals, and noncombatants.

c. The standards for this task (the bottom-line results or desired end-states that performance of the task will accomplish) are:

- 1) Joint fires and joint fire support operations planning provides for identification and attack of the enemy critical capabilities, vulnerabilities, and centers of gravity in support of the JTF and component(s) concept(s) of operations and, where appropriate, scheme(s) of maneuver.
- 2) JTF and component intelligence collection requirements are prioritized and assigned to component, theater, and national commanders and directors for collection by RSTA assets.
- 3) JTF staff monitors deployment and employment of required joint fires and joint fire support assets required to support Commander, Joint Task Force's (CJTF) intent and concept of operations. JTF orders to components establish

effective supporting and supported relationships for fire support of anticipated operations.

4) Fire control measures facilitate flexible and responsive delivery of joint fires and joint fire support and minimize fratricide, collateral damage, and/or non-combatant casualties.

5) Battle damage assessment (BDA) confirms the destruction, neutralization, harassment, or interdiction of surface targets. BDA determines the effects of non-lethal fires.

5. Self-Assessment and Feedback.

a. One of the major challenges to assessing training performance and giving meaningful feedback in the joint arena is finding the right people with the right expertise to conduct the assessment. At lower echelons, those personnel can be found in like units or in higher echelon units and can be tasked to perform assessment and feedback for other units' training. But for a joint task force at the corps level, it is often times impractical to task like or higher units for personnel. Additionally, during actual combat or for training at times other than during a major joint exercise, expert observers/controllers/trainers will not be present to provide necessary feedback. So where does one find the required expertise? It can be found among the corps JTF's own staff personnel. Therefore, the training performance measures and feedback methods contained in this guide were designed for **self**-assessment by personnel in those JTF staff sections involved with joint fires operations.

b. The performance measures and metrics or Self-Assessment Tools to be used by the J3 for the overall JTF Joint Fires AAR are as follows.

1) Use of JTF Joint Fires Assets: Self-Assessment Tool 1 (Page E-1-1) provides a measurement of whether or not targeting assets and weapons were used according to the commander's intent during planning, employment, and transition at the strategic, operational, and tactical levels. This information also provides indications to trainers of problems in the development of the commander's intent.

2) Acquisition of Targets and Execution of Fires: Self-Assessment Tool 2 (Page E-2-1) provides a measurement of the JTF's effectiveness in acquiring and engaging HPTs for the deep, close, and rear battles. This data enables staff personnel to provide feedback about acquisition planning and employment. The tables are formatted for ease of use by the JTF's personnel who can take this information, assess proficiencies, and pinpoint training issues.

3) Measures of Performance (Key Tasks): A series of criteria scales in Self-Assessment Tool 3 (Page E-3-1) provide a measurement of how well the JTF accomplished key fire support tasks for the deep, close, and rear battles. These are subjective measurements based on key staff members' judgement and are used to bring out key points for discussion during the JTF Joint Fires AAR.

4) Assessment of Training Objective Standards: Self-Assessment Tool 4 (Page E-4-1) provides performance measures for each of the five major training objective standards. It is to be used in giving feedback on how well the JTF met each standard, its components, and the associated task elements within each component. The rating scales used are subjective in nature, but are structured to display all the processes involved in performing key tasks in an easy to understand format and in a logical AAR presentation format.

Self-Assessment Tool 1

Use of JTF Joint Fires Assets

The following three tables concern the effectiveness of planning for and employing targeting assets and weapons by type of operation during the “phases” of planning, employment, and transition. Indicate whether each asset or weapon was planned for or employed according to the JTF commander’s intent.

Table 1. Use of JTF Joint Fires Assets: **Planning**

Targeting Assets	Strategic Level	Operational Level	Tactical Level
Armed Reconnaissance		Yes No NA	Yes No NA
Aerial			
- Utility Aircraft	Yes No NA	Yes No NA	Yes No NA
- Special Electronic Mission Aircraft (SEMA)	Yes No NA	Yes No NA	Yes No NA
- Observation and Utility Helicopters	Yes No NA	Yes No NA	Yes No NA
- Unmanned Aerial Vehicles (UAVs)	Yes No NA	Yes No NA	Yes No NA
- Airborne Warning and Control System (AWACS)	Yes No NA	Yes No NA	Yes No NA
- Joint Surveillance and Target Attack Radar System (JSTARS)	Yes No NA	Yes No NA	Yes No NA
Ground Observers			
- Combat Electronic Warfare and Intelligence (CEWI)	Yes No NA	Yes No NA	Yes No NA
- Special Operations Forces (SOF)	Yes No NA	Yes No NA	Yes No NA
Other:	Yes No NA	Yes No NA	Yes No NA
	Yes No NA	Yes No NA	Yes No NA
Weapons			
Close Air Support (CAS)	Yes No NA	Yes No NA	Yes No NA
Air Interdiction (AI)	Yes No NA	Yes No NA	Yes No NA

	Strategic Level	Operational Level	Tactical Level
Armed Reconnaissance		Yes No NA	Yes No NA
Field Artillery	Yes No NA	Yes No NA	Yes No NA
Rockets	Yes No NA	Yes No NA	Yes No NA
Missiles	Yes No NA	Yes No NA	Yes No NA
Naval Surface Fires	Yes No NA	Yes No NA	Yes No NA
Armed Helicopters (attack; other)	Yes No NA	Yes No NA	Yes No NA
Electronic Warfare (EW)	Yes No NA	Yes No NA	Yes No NA
Psychological Operations (PSYOP)	Yes No NA	Yes No NA	Yes No NA
Other:	Yes No NA	Yes No NA	Yes No NA
	Yes No NA	Yes No NA	Yes No NA

Table 2. Use of JTF Joint Fires Assets: **Employment**

	Strategic Level	Operational Level	Tactical Level
Targeting Assets			
Armed Reconnaissance		Yes No NA	Yes No NA
Aerial			
- Utility Aircraft	Yes No NA	Yes No NA	Yes No NA
- SEMA	Yes No NA	Yes No NA	Yes No NA
- Observation and Utility Helicopters	Yes No NA	Yes No NA	Yes No NA
- UAVs	Yes No NA	Yes No NA	Yes No NA
- AWACS	Yes No NA	Yes No NA	Yes No NA
- JSTARS	Yes No NA	Yes No NA	Yes No NA
Ground Observers			
- CEWI	Yes No NA	Yes No NA	Yes No NA
- SOF	Yes No NA	Yes No NA	Yes No NA
Other:	Yes No NA	Yes No NA	Yes No NA
	Yes No NA	Yes No NA	Yes No NA
	Yes No NA	Yes No NA	Yes No NA
Weapons			
CAS	Yes No NA	Yes No NA	Yes No NA
AI	Yes No NA	Yes No NA	Yes No NA
Armed Reconnaissance		Yes No NA	Yes No NA

	Strategic Level	Operational Level	Tactical Level
Field Artillery	Yes No NA	Yes No NA	Yes No NA
Rocket	Yes No NA	Yes No NA	Yes No NA
Missiles	Yes No NA	Yes No NA	Yes No NA
Naval Surface Fires	Yes No NA	Yes No NA	Yes No NA
Armed Helicopters (attack; other)	Yes No NA	Yes No NA	Yes No NA
EW	Yes No NA	Yes No NA	Yes No NA
PSYOP	Yes No NA	Yes No NA	Yes No NA
Other:	Yes No NA	Yes No NA	Yes No NA
	Yes No NA	Yes No NA	Yes No NA
	Yes No NA	Yes No NA	Yes No NA

Table 3. Use of JTF Joint Fires Assets: **Transition**

	Strategic Level	Operational Level	Tactical Level
Targeting Assets			
Armed Reconnaissance		Yes No NA	Yes No NA
Aerial			
- Utility Aircraft	Yes No NA	Yes No NA	Yes No NA
- SEMA	Yes No NA	Yes No NA	Yes No NA
- Observation and Utility Helicopters	Yes No NA	Yes No NA	Yes No NA
- UAVs	Yes No NA	Yes No NA	Yes No NA
- AWACS	Yes No NA	Yes No NA	Yes No NA
- JSTARS	Yes No NA	Yes No NA	Yes No NA
Ground Observers			
- CEWI	Yes No NA	Yes No NA	Yes No NA
- SOF	Yes No NA	Yes No NA	Yes No NA
Other:	Yes No NA	Yes No NA	Yes No NA
	Yes No NA	Yes No NA	Yes No NA
	Yes No NA	Yes No NA	Yes No NA

	Strategic Level	Operational Level	Tactical Level
Weapons			
CAS	Yes No NA	Yes No NA	Yes No NA
AI	Yes No NA	Yes No NA	Yes No NA
Armed Reconnaissance		Yes No NA	Yes No NA
Field Artillery	Yes No NA	Yes No NA	Yes No NA
Rocket	Yes No NA	Yes No NA	Yes No NA
Missiles	Yes No NA	Yes No NA	Yes No NA
Naval Surface Fires	Yes No NA	Yes No NA	Yes No NA
Armed Helicopters (attack; other)	Yes No NA	Yes No NA	Yes No NA
EW	Yes No NA	Yes No NA	Yes No NA
PSYOP	Yes No NA	Yes No NA	Yes No NA
Other:	Yes No NA	Yes No NA	Yes No NA
	Yes No NA	Yes No NA	Yes No NA

Self-Assessment Tool 2

Acquisition of Targets and Execution of Fires

This self-assessment tool concerns acquisition of targets and execution of fires on key high pay-off targets (HPTs). Key HPTs are those identified by the unified command, the CJTF, and/or the JTCB as having particular importance. Circle the type of operation and list the HPTs identified. For each target, mark whether a system was assigned to acquire the target, whether a redundant system was assigned, and whether the target was acquired. Then mark the description of the commander's intent for each target; Intercept, Harass, Neutralize, or Destroy based on the following criteria:

Interdict	≤ 5% damage inflicted
Harass	≤ 10% damage inflicted
Neutralize	≤ 30% damage inflicted
Destroy	≤ 40% damage inflicted

Finally, circle the result of the engagement. If the target was acquired but not engaged, or if the fire had no effect, circle None.

Type of Operation: Tactical Level
 Operational Level
 Theater Strategic Level

(Write in HPT identification)	Primary Acquisition System?	Redundant Acquisition System?	Was Target Acquired?	Commander's Intent	Effect Achieved
HPT 1:	Yes No	Yes No	Yes No	Interdict Harass Neutralize Destroy	Interdict Harass Neutralize Destroy None
HPT 2:	Yes No	Yes No	Yes No	Interdict Harass Neutralize Destroy	Interdict Harass Neutralize Destroy None
HPT 3:	Yes No	Yes No	Yes No	Interdict Harass Neutralize Destroy	Interdict Harass Neutralize Destroy

(Write in HPT identification)	Primary Acquisition System?	Redundant Acquisition System?	Was Target Acquired?	Commander's Intent	Effect Achieved
					None
HPT 4:	Yes No	Yes No	Yes No	Interdict Neutralize Harass Destroy	Interdict Neutralize Harass Destroy None
HPT 5:	Yes No	Yes No	Yes No	Interdict Neutralize Harass Destroy	Interdict Neutralize Harass Destroy None
HPT 6:	Yes No	Yes No	Yes No	Interdict Neutralize Harass Destroy	Interdict Neutralize Harass Destroy None
HPT 7:	Yes No	Yes No	Yes No	Interdict Neutralize Harass Destroy	Interdict Neutralize Harass Destroy None
HPT 9:	Yes No	Yes No	Yes No	Interdict Neutralize Harass Destroy	Interdict Neutralize Harass Destroy None
HPT 10:	Yes No	Yes No	Yes No	Interdict Neutralize Harass Destroy	Interdict Neutralize Harass Destroy None

Self-Assessment Tool 3 **Measures of Performance (Key Tasks)**

Rate how well the JTF accomplished the following:

Theater Strategic Level Operations

1.	Plans were made to employ theater strategic firepower.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
2.	Means to deliver theater strategic firepower were allocated.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
3.	Fire control measures were adequate to enhance flexibility and avoid fratricide.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
4.	Target acquisition means were identified and allocated.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
5.	Strategic fires supporting JTF operations were executed IAW CJTF's priorities and intent for fires.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
6.	Battle damage assessments for theater strategic operations were accurate and timely.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely

Operational Level Operations

1.	Plans were made to employ operational firepower.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
2.	Means to deliver operational firepower were allocated.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
3.	Target acquisition means were identified and allocated.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
4.	Fire control measures were adequate to enhance flexibility and avoid fratricide.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
5.	Operational firepower was employed IAW CJTF's priorities and intent for fires.	0	1	2	3	4
	a. Preplanned targets.	Not At All	Poorly	Somewhat	Sufficiently	Completely
	b. Targets of opportunity.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
6.	Battle damage assessments were accurate and timely.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely

Tactical Operations

1.	Fires supporting tactical operations were executed IAW CJTF's and component commanders' priorities and intents for fires.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
2.	Firepower was immediately responsive to the forces in contact.	0	1	2	3	4
	a. Preplanned targets.	Not At All	Poorly	Somewhat	Sufficiently	Completely
	b. Targets of opportunity.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
3.	Firepower was synchronized.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
4.	Fires were sustained throughout the operation.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
5.	Fire control measures were adequate to enhance flexibility and avoid fratricide during tactical operations.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
6.	Target acquisition means were identified and allocated.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely
7.	Battle damage assessments were accurate and timely.	0	1	2	3	4
		Not At All	Poorly	Somewhat	Sufficiently	Completely

Self-Assessment Tool 4
Assessment of Training Objective Standards

To rate the JTF's performance with respect to the outcome of its meeting the overall joint fires training objective standards, the rating should be on the scale Adequate, Marginal, Not Adequate, defined below. The rating is framed in a box with the rating scale as shown in the example below.

E X A M P L E

Training Objective Standard 1: Joint fires and joint fire support operations planning provides for identification and attack of the enemy critical capabilities, vulnerabilities, and centers of gravity in support of the JTF and component(s) concept(s) of operations and, where appropriate, scheme(s) of maneuver.			
Adequate		Marginal	Not Adequate
↓			

In each case, circle the appropriate rating, using the scale below for guidance:

Adequate	Marginal	Not Adequate
↓	↓	↓
The JTF can successfully meet the standard. Standard is accomplished with no significant shortcomings.	The JTF can successfully meet the standard with some shortcomings.	The JTF cannot meet the standard.

Assessment of Training Objective Standards

Each training objective standard is followed by a description of the processes involved in meeting the training objective standard and its components. This allows staff personnel to provide precise diagnostic feedback during the AAR. It also facilitates extracting information for the development of future training to correct any deficiencies.

Training Objective Standard 1: Joint fires and joint fire support operations planning provides for identification and attack of the enemy critical capabilities, vulnerabilities, and centers of gravity in support of the JTF and component(s) concept(s) of operations and, where appropriate, scheme(s) of maneuver.	Adequate	Marginal	Not Adequate
--	----------	----------	--------------

PROCESS

Task Elements

Standard Component A: Joint fires plan integrates target acquisition means with fire delivery systems to support the JTF and components' concepts of operations.

JTF J2 takes the following actions:

- Orients Intelligence Preparation of the Battle Space (IPB) on the JTF mission.
- Produces initial drafts of Commander's Critical Intelligence Requirements (CCIR) and Essential Elements of Intelligence (EEI).
- Coordinates with Unified Command Joint Intelligence Center (JIC) to determine availability of national and theater Reconnaissance, Surveillance, and Target Acquisition (RSTA) assets.

JTCB convenes and performs the following actions:

- Drafts targeting guidance and priorities for CJTF approval.
- Based on input from the J2, identifies high-value targets (HVTs) and prepares initial joint target lists (JTLs).
NOTE: In some cases the initial target list will be provided by the Unified Command in the form of a JTL.
- Requirements for, and availability of all target acquisition assets are assessed.
- Requirements for, and availability of fires means to include CAS, AI, NSF, EW, PSYOP, and armed helicopters are identified.

JTCB meets:

- Assists in development of estimate and courses of action (COAs).
- Reviews JFACC recommendations.

J3, assisted by the JFFC, initiates his estimate process based on restated mission, the CJTF's stated intent, and the factors of METT-T. After determining and identifying the availability of all target acquisition and delivery means, the J3 provides this data and a recommended deployment sequence and force mix to the JPG in order to assist in COA development. JPG considers all available fire support systems to include target acquisition assets when developing the joint fires estimate. Upon receipt of proposed COAs from the JPG, the J3 develops a fire plan for each COA which positions target acquisition and delivery systems to support the concept of operations.

NOTE: Positioning of forces, including fires assets, is closely coordinated with the Unified Command and Department of State to ensure that required out of JOA country clearances can be obtained to marshal, stage and overfly as necessary to support JTF operations. JFACC conducts planning in parallel with JTF staff and develops recommendations for apportionment and joint integrated priority target list (JIPTL). He incorporates CJTF guidance, JTL, and component requirements for joint fire support.

The J3 ensures that joint fires annex with accompanying appendices, target list matrices, and overlays reflects positioning and utilization of all target acquisition assets. A sensor/attack matrix may be used in order to ensure that all HPTs can be detected and that a delivery system is available to attack the target.

Components review the plan and forward recommended changes.

JTCB reviews recommendations and provides advice to CJTF and guidance to J3.

Standard Component B: Joint fires plan integrates fires according to CJTF's intent.

JFACC conducts planning in parallel with JTF staff and develops recommendations for apportionment and joint integrated priority target list (JIPTL). He incorporates CJTF guidance, JTL, and component requirements for joint fire support.

JTCB reviews JFACC recommendations for apportionment:

- a) Compliance with CJTF intent.
- b) Support of components' concepts of operations.

CJTF selects COA and states joint fires priorities (RSTA assets, AI, CAS, NSF, artillery, EW, PSYOP, deception operations) and desired effects.

The J3 ensures that paragraph 3a(2) Fires includes the following:

- a) Outline of joint fires plan, synchronization, and integration measures to support each phase of the battle.
- b) Apportionment.
- c) Designation of components which have priority of joint fire support by phase.
- d) Designation of priority of use of low-density munitions.
- e) Description of times, duration and desired effects of supporting fires.
- f) Establishment of priority for requested joint air and naval surface fires.

The J3 ensures that the joint fires annex with accompanying appendices, target list matrixes and overlays reflects:

- a) Enemy fire support capabilities including artillery, air defense, attack helicopters, EW, naval surface fires and NBC capabilities, as well as target acquisition capabilities.
- b) Information regarding friendly forces mission and concept of fires to include joint air and naval forces.
- c) All fire support resources assigned, attached, and supporting the JTF.
- d) Priorities; concept for support; apportionment.
- e) JIPTL.

The JTF J3 ensures that necessary information from the joint fires plan (e.g., JIPTL and FSCMs) is integrated into the JTF DST.

Standard Component C: Joint fires plan provides for flexibility.

J3, assisted by JFFC, provides permissive and restrictive fire control measures to the JPG as a part of the JTF warning order.

During war-gaming, the J3 presents the fire plan for each COA which covers plans for expeditiously attacking both known and unknown time critical targets (TCTs).

The J3 ensures that the joint fires annex with accompanying appendices, target list matrices, and overlays reflects:

- a) Fires organization for combat, joint fires priorities, and concept for support.
- b) Permissive and restrictive FSCMs.

The JTF orders group is briefed on:

- a) Joint fires organization for combat.
- b) Concept for joint fires within the JOA and joint fire support to component operations.
- c) Priorities of fire during all phases.
- d) Apportionment.
- e) JIPTL.
- f) All fire control and coordination measures.
- g) Essential airspace control measures.

Hand off procedures from target detection means to attack systems are refined to engage TCTs.

Standard Component D: Joint fires are executed so as to meet CJTF and component commanders' intents.

CJTF visualizes the battlefield.

CJTF personally observes execution of critical aspects of the operation and he receives situation reports from component commanders.

The J2:

- a) Coordinates targeting and damage assessment requirements and locations of RSTA assets with components to ensure unity of effort and synchronization of RSTA operations with fires.

- b) Provides and constantly updates information to the CJTF regarding the military aspects of the terrain as it relates to joint fires; e.g., elevation, soil density, vegetation, and masking.
- c) Provides latest information regarding potential targets of opportunity, as well as enemy vulnerabilities to indirect fires, air-delivered munitions. This will include the status and location of enemy fire support assets and their vulnerability to counter fires.
- d) Develops BDA and recommends retargeting as appropriate.
- e) The JFACC recommends changes to apportionment and the JIPTL.
- f) The J3 continually updates and provides the CJTF with the location, disposition, status, and capability of all JTF joint fires assets and the effectiveness of the joint fires plan.
- g) The J2 and J3 continually provide updates to the CJTF regarding the location, status, and disposition of target acquisition assets and recommend changes as appropriate.
- h) The JTCB reviews changes to apportionment and JIPTL, and makes recommendations to CJTF.
- i) The CJTF changes or provides additional CCIR to the J3 who disseminates requirements to other JTF staff members and components as the battle progresses.
- j) After considering the factors of METT-T, the CJTF adjusts his position on the battlefield to best control and influence fires as well as maneuver and other operations.

CJTF directs and leads subordinate operational forces.

Based on what he sees and the information provided to him, CJTF makes appropriate decisions in response to changes in METT-T.

The J3, assisted by the JFFC:

- a) Provides responses for new CCIRs related to fires.
- b) Monitors employment of joint fires LAW the JIPTL and DST.
- c) Anticipates other joint fires requirements as changes occur on the battlefield by:
 - 1) Understanding the respective commanders' intents.
 - 2) Remaining knowledgeable regarding battlefield events and the flow of the battle.
 - 3) Following and war gaming the JTF battle through the use of templates.
 - 4) Continuing the IPB process in coordination with the JTF J2.

The J3, assisted by the J2 and C2W officer, develops combat assessments (CA) with reattack recommendations. JTCB considers BDA and CA; recommends targeting action or change in targeting action or allocation.

In the event that the joint fires do not achieve CJTF's intent due to unanticipated enemy actions or other battlefield events, the J3, assisted by the JFFC, conducts accelerated fire planning in coordination with the component service and function staffs.

- a) Accelerated fire support planning is based on updated IPB and changes to the JTF OPLAN.
- b) New targets are identified and incorporated into the JIPTL in order to match targets to available weapons systems. Joint/multinational operational firepower resources are reallocated as necessary.
- c) The LCC changes the location of the FSCL. If other components disagree with the FSCL location and the issue is not resolved by the JTCB, CJTF resolves the issue.

JTF command posts track and support the battle.

J3, assisted by the JFFC, coordinates with the JOC, JTOC, and JRTOC to synchronize the targeting effort as it is being executed:

- a) Executes planned fires IAW the JTF plan and the DST.
- b) Continually coordinates with the JTF staff to ensure that fires adequately support the concept of operations.
- c) Evaluates fire requests in light of other requirements and joint fires resources available. Provides, denies, or substitutes other joint fires means within the scope of the delegated authority.
- d) Coordinates attack of targets of opportunity obtained by JTF and supporting target acquisition assets; e.g., UAV, LRSU, sensors, radars, JSTARSS, and SOF with the appropriate components.
- e) Monitors and coordinates execution of AI with the JFACC.
- f) Processes and coordinates JSEAD and JAAT missions.
- g) Monitors immediate CAS and NSF requests.
- h) Ensures that the ACA is kept current on joint fires and fire support operations.
- i) Monitors the availability and employment of special munitions; e.g., FASCAM, Search and Destroy Armor Munitions (SADARM), smoke, and illumination as outlined in the joint fires plan.

J3, assisted by the JFFC, ensures that fires are synchronized and integrated with JTF OPLAN by:

- a) Performing target analyses.
- b) Coordinating with subordinate fire support cells to integrate fires with maneuver.
- c) Coordinating with JTF staff to ensure that CAS, AI, and NSF are integrated into the battle and synchronized with artillery fires, EW, and SOF, and armed helicopter operations.
- d) Coordinating the timing and duration of offensive EW (e.g., jamming) to support JTF maneuver and attacks by lethal systems.

J2 ensures that assessment asset managers (e.g., AOC, UAV, SOF units) are kept updated on target locations and are tasked to provide damage assessments as attacks are executed.

J3 and JFFC continue to track the battle flow through:

- a) Spot reports and situation reports.
- b) Inter-staff coordination.
- c) Monitoring communications channels.
- d) BDA.
- e) CA.

JTF conducts battlefield update (METT-T based).

J3 provides updates on the status of land component field artillery, EW, and target acquisition assets.

JFACC representative, NGLO, and other representatives from the components provide updates regarding status of CAS, AI, and other air assets, and status and availability of NSF and SOF.

Updates include:

- a) CA of previously executed fires.
- b) Recommendations for retargeting and reapportionment of joint fires assets.
- c) Planned movement of target acquisition and delivery assets with assessment of consequences in terms of availability of fires.
- d) Types and quantity of munitions available with assessment of consequences in terms of availability of fires.

CJTF decides on operational actions/direction under time constraints.

The CJTF directs retargeting, reapportionment of joint fires assets, or changes to JTF target list based on his own appreciation of the situation, CA, and recommendations from J3, JFACC, component commanders, and the JTCB.

Understanding the CJTF's intent, the J3 immediately notifies him concerning events which indicate the joint fires plan execution is not occurring as envisioned and recommends and/or takes corrective actions.

The J3 reviews and modifies the joint fires plan and DST to keep pace with the JTF ongoing battle, to support unplanned battlefield events, and to incorporate CJTF decisions.

JFACC modifies JIPTL to incorporate CJTF decisions.

The CJTF's decisions regarding changes to the fires plan are captured by the J3 and are disseminated to component commands. An update is also provided to the unified command HQ on a periodic basis. JFFC assists.

Training Objective Standard 2: JTF and component intelligence collection requirements are prioritized and assigned to component, theater, and national commanders and directors for collection by RSTA assets.

Adequate

Marginal

Not Adequate

PROCESS

Task Elements

JTF J2 coordinates with the Unified Command Joint Intelligence Center (JIC) to determine availability of national and theater RSTA assets.

Staff monitors the deployment of all forces. Additionally, the J3, assisted by the JFFC and the J2, monitors the components' positioning of assets to ensure that no gaps exist in supporting capabilities.

CJTF selects COA and states joint fires priorities (e.g., RSTA assets, AI, CAS, NSF, artillery, EW, PSYOP, deception operations) and desired effects.

The J2 coordinates targeting and damage assessment requirements and locations of RSTA assets with components to insure unity of effort and synchronization of RSTA operations with fires.

Training Objective Standard 3: JTF staff monitors deployment and employment of required joint fires and joint fire support assets required to support Commander, Joint Task Force's (CJTF) intent and concept of operations. JTF orders to components establish effective supporting and supported relationships for fire support of anticipated operations.

Not Adequate

Marginal

Adequate

PROCESS

Task Elements

JTCB convenes and performs the following actions:

- a) Assesses requirements for, and availability of, all target acquisition assets.
- b) Identifies requirements for, locations of, and availability of fires means to include CAS, AI, NSF, EW, PSYOP, and armed helicopters.

Staff monitors the deployment of all forces. Additionally, the J3, assisted by the JFFC and the J2, monitors the components' positioning of assets to insure no gaps exist in supporting capabilities.

Upon receipt of proposed COAs from the JPG, the J3 develops a fire plan for each course of action which:

- a) Supports the CJTF's intent for fires.
 - b) Provides required fires requested to support components' concept(s) of operations(s) and scheme(s) of maneuver in accordance with the CJTF's priorities.
 - c) Positions target acquisition and delivery systems to support the concept of operations.
- NOTE: Positioning of forces, including fires assets, is closely coordinated with the Unified Command and the Department of State to ensure that required out-of-JOA country clearances are obtained to marshal, stage and overfly as necessary to support JTF operations.
- d) Ensures coordination, synchronization, and integration of strategic, operational, and tactical fires means.

During war-gaming, the J3 presents the fire plan for each COA which covers (among other things) integration of movement and displacement of fires assets and units to follow the battle flow.

JTF joint fires plan is updated and coordinated with latest deep battle plans. The JTF Deep Operation Coordination Center (DOCC) assures integration of organic, supporting and joint fires in support of JSEAD and the attack of deep targets.

Plans for support of the rear battle are refined to include allocation of fire support assets to the tactical combat force (TCF).

Rehearsals include the positioning and displacement plan for all joint fires and target acquisition assets.

The J3 continually updates and provides the CJTF with the location, disposition, status and capability of all JTF joint fires assets and the effectiveness of the joint fires plan.

The J2 and J3 continually provide updates to the CJTF regarding the location, status, and disposition of target acquisition assets and recommend changes as appropriate.

JTF conducts battlefield update (METT-T based).

- a) Status of artillery.
- b) Status of CAS, NSF.
- c) BDA and CA with recommendations for retargeting or reapportionment of assets.
- d) Movement plans.
- e) Munitions.

Training Objective Standard 4: Fire control measures facilitate flexible and responsive delivery of joint fires and joint fire support and minimize fratricide, collateral damage, and/or non-combatant casualties.
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	Adequate	Marginal	Not Adequate
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PROCESS

Task Elements

JTF identifies proponents for various functions requiring deconfliction of systems and missions.

- a) JFACC is designated.
- b) JFFC is designated.
- c) ACA is designated.
- d) AADC is designated.
- e) JTCB is established and initial meeting scheduled to oversee JTF targeting functions and develop broad targeting audience.
- f) Liaison and communications are established between the component fire planners and from the components to the JTF HQ.
- g) Liaison and communications are established between the J3 and coalition fire planners.

Civil Affairs staff officer collects information concerning locations of refugees, noncombatants, significant historic, cultural and religious structures and population centers which may impact fires and require FSCMs, e.g., NFAs.

J3, assisted by the JFFC, provides the following information to the JFG and joint fire planners as a part of the JTF warning order:

- a) Permissive and restrictive fire control measures.
- b) Special instructions on ROE, fire support communications, and logistic support.

J3 ensures integration of joint fires and joint fires considerations into body and appropriate annexes of the OPOD/FRAGO.

- a) Task organization.
- b) Intelligence: Appendix 4 - Targeting.
- c) Operations:
 - 1) Appendix 3 - C2W.
 - 2) Appendix 4 - PSYOP.
 - 3) Appendix 7 - ROE.
 - 4) Appendix 9 - Reconnaissance.
 - 5) Appendix 10 - Counter C3.
 - 6) Appendix 15 - Counterattack.
 - 7) Appendix 17 - Amphibious operations.
 - 8) Appendix - Joint fire support.
 - 9) Appendix - Synchronization matrix.
 - 10) Appendix - Forcible entry operations.
 - 11) Appendix 19 - Airspace control plan (ACP).
- d) Logistics: Appendix 6 - Non-nuclear ammunition.
- e) Civil affairs.
- f) Command relationships.
- g) C3 systems.
- h) Space operations.
- i) Force protection.
- j) Execution checklist.

Civil Affairs staff officer coordinates with J3 to update locations of refugees and noncombatants, built-up areas, and cultural/religious sites.

Airspace control center is continually updated on location, direction, and trajectory of surface fires.

J3 monitors changes of location of friendly forces, refugees, or other noncombatants.

J3 ensures locations of SOF and long range reconnaissance patrols (LRRPs) are known and that the joint fires plan is adjusted to avoid fratricide and to provide joint fire support as required for direct action missions or contingency operations.

Rehearsals incorporate measures to prevent fratricide, nonessential collateral damage, and noncombatant casualties; measures include FSCMs, ROE, ACP, and IFF procedures.

The J3 disseminates shifts to the FSCL location as it is moved.

The LCC changes the location of the FSCL. If other components disagree with the FSCL location and the issue is not resolved by the JTCB, CJTF resolves the issue.

Training Objective Standard 5: Battle damage assessment (BDA) confirms the destruction, neutralization, harassment, or interdiction of surface targets. BDA determines the effects of non-lethal fires.

Marginal

Adequate

Not Adequate

PROCESS

Task Elements

During COA comparison process, the J3 presents the fire plan for each COA which covers (among other topics) linkage of BDA assets to the attack of HPTs.

J3 and J2 ensure that the JTF collection plan satisfies BDA requirements.

Rehearsals include all aspects of BDA procedures.

The J2:

- a) Coordinates targeting and damage assessment requirements and locations of RSTA assets with components to ensure unity of effort and synchronization of RSTA operations with fires.
- b) Develops BDA and recommends retargeting as appropriate.

J2 ensures that assessment asset managers (e.g., AOC, UAV, SOF units) are kept updated on target locations and are tasked to provide damage assessments as attacks are executed.

Updates include success or failure of previously executed fires and recommendations for retargeting.

APPENDIX F

Deep Operations Coordination Cell Description and Functions

1. The Deep Operations Coordination Cell (DOCC) is formed from the Corps Fire Support Element and augmentees from component and functional commands.
2. The J3 is CJTF's executive agent for Deep Operations. All other JTF staff sections are responsible for coordinating Deep Operations actions with J3.
3. The DOCC coordinates targeting guidance and objectives, JTF staff input into the ATO, ATO execution, and fire support coordination measures. The DOCC is divided into three cells: the Target Development Section (TDS), the Battle Management Section (BMS), and the Fire Support Element (FSE). It will normally be manned as shown below.

DOCC

Chief, Deep Operations (1 x O5)

TDS

Tgt Dev Off (2 x O4)
Tgt Dev Off (2 x O3)
Intel Tech (2 x W4)
Tgt Dev NCO (1 x E7)
Tgt Dev NCO (1 x E6)

BMS

Operations Off (4 x O4)
Operations Off (4 x O3)
Operations NCO (2 x E7)
Fire Support NCO (2 x E7)
Fire Support NCO (3 x E5)

FSE

Chief, FSE (1 x O5)
FS Off (1 x O3)
FS NCO (2 x E7)

4. Target Development Section Functions and Responsibilities.
 - a. Coordinates with supporting MI Bde to identify targets in support of CJTF's Targeting Guidance and Objectives.
 - b. Receives Candidate Target Lists (CTLs) from component and functional commands as well as major subordinate commands within the Corps.
 - c. Integrates CTLs into one prioritized CTL, which it submits to the Battlefield Coordination Detachment (BCD) at the Air Operations Center (AOC).
 - d. Establishes automated connectivity via Rapid Application of Air Power (RAAP) with JFACC and components.
 - e. Establishes automated connectivity via Advanced Field Artillery Tactical Data System (AFATDS) or the Target Status (TARSTAT) program with major subordinate commands within the Corps.
 - f. Coordinates target validation with the BCD just prior to execution of the attack.

g. Ensures that "rationale" and "desired effects" are provided to the BCD with the CTL.

h. Ensures that CTL is reviewed by JTF Civil Affairs Officer, the Engineer, and the Staff Judge Advocate.

i. Maintains the JTF "No-Strike Target List."

5. Battle Management Section (BMS) Functions and Responsibilities.

a. Drafts and recommends Targeting Guidance and Objectives to CJTF. This is formulated during the daily targeting meeting. Disseminates approved targeting guidance to component and functional commands and to major subordinate commands within the Corps.

b. Recommends CAS/AI weight of effort to CJTF.

c. Breaks down the ATO for targets submitted by component and functional commands and by major subordinate commands within the Corps.

d. Prepares daily divert list for ATO execution and forwards it to BCD operations section.

e. Monitors execution of current day's ATO to ensure CJTF guidance is met.

f. Coordinates divers/rerolls of air missions to ensure CJTF guidance is met.

g. Coordinates changes in Fire Support Coordination Measures (FSCM) with the FSE.

h. Integrates Theater Missile Defense attack operations with J3-Ops.

i. Coordinates deep attack operations of major subordinate commands within the Corps with the AOC through the BCD.

j. Prepares the following JTCB products:

- (1) Current Situation Slides
- (2) Today's Objectives Slides
- (3) Future Operations +24 Hours Slides

- (4) Future Operations +96 Hours Slides
- (5) FSCL Status Projected to +72 Hours Slides

6. Fire Support Element (FSE) Functions and Responsibilities

- a. Advises CJTF and J3 on capabilities, limitations, and employment of joint fires assets.
- b. Recommends FSCL placement and changes to the J3.
- c. Monitors No-Fire Areas (NFAs) and Restricted Fire Areas (RFAs) to prevent fratricide.
- d. Coordinates with component and functional commands and with major subordinate commands within the Corps and recommends opening and closing of kill-boxes short of the FSCL to the J3.
- e. Coordinates all Army Tactical Missile System (ATACMS) engagements.

APPENDIX G
Battlefield Coordination Detachment
Description and Functions

1. The Battlefield Coordination Detachment is an Army liaison element provided to the JFACC to coordinate air support within the Air Operations Center (AOC). The BCD processes requests for tactical air support, monitors and interprets the land battle situation for the AOC, and provides the necessary interface for exchange of current intelligence and operational data. The BCD is organized into six sections (operations, plans, intel, air defense, airspace management, and airlift), under the control of a headquarters element. The sections and their functions are described below as they relate to Joint Fires.

2. BCD Operations Section.

a. Monitor execution of the current ATO as it pertains to sorties planned against all nominated targets.

b. Coordinate with JTF Deep Operations Coordination Cell (DOCC) and the AOC Operations Section on canceled, diverted, or rerolled missions planned against surface targets.

c. Conduct target validation and refinement for AI, EW, PSYOP leaflet drops, and PSYOP command net interdiction missions.

d. Coordinate with AOC Combat Operations Section on immediate requests for AI, CAS, EW, PSYOP, and reconnaissance.

e. Obtain the most current friendly land force situations from J3 Current Ops Section.

f. Monitor and interpret the enemy and friendly land forces situation for the AOC, inform the AOC Combat Operations Section of significant changes in operations, objectives, and priorities.

g. Provide ground liaison officers (GLOs) and internal BCD sections with periodic updates on the current situation.

h. Coordinate firing of immediate ATACMS missions with the AOC Combat Operations Section and BCD Airspace Management Section.

i. Coordinate immediate Special Electronic Mission Aircraft (SEMA) missions with the AOC Combat Operations Section and BCD Airspace Management Section.

j. Monitor the employment of air-deliverable mines and provide information to DOCC.

k. Coordinate changes to the FSCL and other FSCMs with the AOC.

l. Forward AOC requests for immediate ATACMS and other support to the DOCC or FSE.

m. Coordinate and synchronize current Army aviation and deep attack operations with the BCD Airspace Management Section.

n. Coordinate with PSYOP planners in the integration of leaflet drops and Commando Solo broadcasts into the ATO cycle.

o. Deconflict proposed ATO mission changes beyond the FSCL with friendly forces forward of the FLOT, and any violations of restrictive FSCMs.

3. BCD Plans Section.

a. Obtain OPLANS/OPORDS, overlays and 24-96 hour projection of the JTF concept of operations, targeting priorities, and target nominations for AI, CAS, and PSYOP from the DOCC.

b. Provide the JFACC concept of operations and weight of effort for CAS/AI, target priorities, air reconnaissance, electronic warfare, and battle status from the AOC to the DOCC.

c. Maintain land situation maps portraying current enemy situation, projected friendly and enemy situation (24-96 hours) with supporting graphics, and CAS/AI, interdiction, reconnaissance, PSYOP, and EW target nominations.

d. Coordinate with the BCD Airspace Management Section on operations 24-96 hours out and their impact on current and planned airspace control measures.

e. Coordinate planned ATACMS missions with the AOC Combat Plans Section and the BCD Airspace Management Section.

f. Pass projected AOC requests for ATACMS and other fire support to the DOCC.

g. Inform AOC Plans Section of Army aviation operations.

h. Ensure DOCC target nominations are submitted within timelines of the established ATO planning cycle.

i. Ensure target nominations are deconflicted and appropriately weaponized throughout the ATO Planning Process.

j. Represent land components interests during the Mobile Target Working Group, the Joint Guidance, Apportionment, and Targeting (JGAT) process, and the Night Guidance, Apportionment, and Targeting (NGAT) process in the AOC. Provide feedback from these sessions to the DOCC.

k. Brief the JFACC and AOC personnel on the ground situation, the CJTF's intent, concept of operations, targeting guidance, target nominations, and planned FSCLs.

l. Provide GLOs and internal BCD sections information on JTF-planned operations.

4. BCD Intelligence Section.

a. Support Operations Section target validation and refinement for interdiction and EW missions.

b. Support Operations Section coordination with the AOC Combat Operations Section on immediate requests for reconnaissance.

c. Monitor real time significant JSTARS, U-2, UAV, and other collection platform information.

d. Analyze emerging targets and validate them for immediate diverts in coordination with the Operations Section.

e. Obtain the most current enemy ground force situations from the J2 through the DOCC.

f. Monitor and interpret the enemy ground forces situation, inform the Operations Section and Plans Section of apparent changes in enemy operations, objectives, and priorities.

g. Process mission reports (misreps) and other BDA, forward BDA information to the DOCC.

h. Assist Plans Section integration of J2 requirements for intelligence collection and EW with Air Force requirements.

i. Obtain the priority intelligence requirements (PIR), collection plan, targeting data, 24-96 hour enemy situation projection, and nominations for reconnaissance and intelligence/EW support from J2 through DOCC.

j. Support the Plans Section by maintaining ground situation maps portraying current and projected enemy situation (24-96 hours) with supporting graphics, and CAS/AI, reconnaissance, and EW target nominations.

k. Support Plans Section briefings to the AOC staff on the current and projected enemy situation.

5. BCD Airspace Management Section.

a. Coordinate land forces' airspace use requirements with the AOC Airspace Management Section.

b. Integrate joint airspace requirements with appropriate Army Airspace Command and Control (A2C2) elements.

c. Integrate land forces' airspace user activities with the AOC airspace plans. Represent the land forces' interests in the development and approval of airspace control measures and restrictions published in the Airspace Control Order (ACO).

d. Advise the Airspace Coordinating Authority (ACA), normally the JFACC, and the BCD Commander of significant activities which affect the joint use of airspace.

e. Advise the ACA and the BCD Commander on the impact of joint airspace control measures or restrictions on the conduct of the land battle.

f. Coordinate land forces' requests for airspace control measures and restrictions to include necessary EW requirements.

g. Ensure Army aviation missions are included in the ATO for the purpose of coordination. This includes SEMA and Operational Support Airlift (OSA).

h. Ensure all A2C2 elements have the necessary IFF/SIF codes.

i. Provide timely and complete distribution of the Airspace Control Plan (ACP) [ATO, ACO, SPINS] to the JTF A2C2 Cell.

j. Monitor the integration of Army Air Traffic Services (ATS) facilities into the AOC's airspace control system.

k. Represent land forces' concerns in the development of the ACP.

l. Provide the ACA with the location and status of Army airfields, NAVAIDS, SAAFRs, and ATS facilities.

m. Coordinate airspace matters with the other BCD sections and the AOC for both current and future operations.

6. BCD Air Defense Section. This section has responsibility for coordinating all aspects of ground air defense with the Area Air Defense Commander, normally the JFACC, and with the AOC's air defense operations elements. The detailed responsibilities and tasks are not provided, since they have little to do with training joint fires.

7. BCD Airlift Section. This section has responsibility for coordinating all aspects of ground airlift with the AOC's airlift operations elements. The detailed responsibilities and tasks are not provided, since they have little to do with training joint fires.

APPENDIX H

Joint Targeting Coordination Board Description and Functions

1. The Joint Targeting Coordination Board (JTCB) is the forum used by CJTF to promulgate and refine targeting guidance to components and functional commanders. The JTCB is CJTF's method of ensuring unity of effort. It is normally chaired by the Deputy CJTF, and required attendees include the component and functional deputy commanders, the J2 and the J3. Primary staff responsibility for the JTCB is J3-Plans.

2. The JTCB provides:

a. CJTF's intent and targeting guidance 72-96 hours out.

b. A forum:

(1) For JTF and components to discuss and coordinate targeting and battlefield geometry.

(2) To review effects of previous guidance.

c. A macro level review of target nominations to ensure consistency with the JTF operations plan.

d. Target priorities and desired effects.

e. Targeting guidance for air, ground, Navy, SOF, air defense, TLAM, C2W, and RSTA assets. (An example of air targeting guidance: Delay movement of operational reserve to prevent effective employment in the main battle area.)

3. Apportionment. During the JTCB, the Deputy CJTF will brief the JFACC Priorities. The JFACC uses this information to determine his recommendation for apportionment. Apportionment is the assignment of effort by percentage and/or priority that should be devoted to various air operations. There are three broad categories of air operations.

a. Strategic Attack. These are missions directed against targets with the purpose of progressive destruction of the enemy's war-making capacity and his will to make war. These are normally very rare in JTF operations.

b. Interdiction. These are missions to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces at such distance from friendly forces that detailed integration of each air mission with fire and movement of friendly forces is not required.

c. Close Air Support/Air Interdiction (CAS/AI). CAS missions are against enemy forces which are in close proximity to friendly forces and which requires detailed

integration of each air mission with the fire and movement of those forces. All missions are against enemy targets in order to shape the battlefield and orchestrate the timing of battle for relatively near-term (12-72 hours out) future operations.

4. Although apportionment is a general term for assignment of effort, allocation is the translation of apportionment into total numbers of sorties by aircraft type available for each category.

5. JTCB Agenda.

- a. Current Operational Update (J3-Ops)
- b. Intel Assessment/BDA (J2)
- c. JTCB Guidance (J3-Plans)
- d. Component/Functional Commands Briefs

6. JTCB Products/Outputs.

- a. CJTF Intent and Guidance (J3-Plans Publishes)
- b. Intel Assessment/BDA Slides (J2 Publishes)
- c. Current Operational Update Slides (J3-Plans Publishes)
 - (1) Current Situation (DOCC Publishes)
 - (2) Today's Objectives (DOCC Publishes)
 - (3) Future Operations +24 Hours (DOCC Publishes)
 - (4) Future Operations +96 Hours (DOCC Publishes)
 - (5) FSCL Status Projected to +72 Hours (DOCC Publishes)

APPENDIX I

Joint Targeting Process

1. The Joint Targeting Process. The depiction below is a simple diagram of the joint targeting process. Although commonly referred to as a "cycle," the joint targeting process is really a continuous process of over-lapping functions independent of a particular sequence.

a. Joint targeting significantly affects the theater campaign as the CJTF must synchronize targeting efforts throughout the JTF to ensure effective accomplishment of his mission. Further complicating this is the fact that targeting occurs at all levels within a Joint Force by all forces capable of attacking targets. It must therefore be deconflicted, coordinated, and prioritized among components to ensure success.

b. The 6-phase Joint Targeting Process is similar to the Army and Marine Corps 4-phase targeting methodology of Decide-Detect-Deliver-Assess. Commander's Objectives and Guidance corresponds to the "Decide" phase. Target Development corresponds to the "Detect" phase. Weaponeering Assessment relates to both the "Decide" and the "Deliver" phase. Force Application and Execution Planning/Force Execution correspond to the "Deliver" phase. And Combat Assessment corresponds to the "Assess" phase.



The Joint Targeting Process

2. Commander's Objectives and Guidance. The CJTF states his desired end-state and damage levels for specific periods of operation (his objectives). He sets targeting priorities, provides planning guidance, and determines the weight of effort for various operations (his "guidance"). Subordinate commanders recommend to the CJTF how to use their combat power most effectively to achieve his objectives. Weight of effort for any aspect of joint targeting may be expressed in terms of percentage of total available resources, priorities for resources used with respect to the other aspects of the theater campaign, or as otherwise determined by the CJTF. The CJTF regularly consults with his staff and component commanders to assess the results of targeting efforts and to refine or change his guidance or objectives. A forum for this can be the Joint Target Coordination Board (JTCB).

3. Target Development. The JTF staff systematically and objectively evaluates potential target systems, individual targets, and the elements of each target in relation to the commander's objectives and guidance to include target validation, collection, and prioritization.

a. This part of the process is the systematic evaluation of potential target systems, individual targets, and the elements of each target in relation to the commander's objectives and guidance. This includes target validation, collection, and target list prioritization. Target development is an objective analysis conducted independently of munitions or platform availability.

b. Target development steps:

- 1) Establish information requirements.
- 2) Identify potential target systems.
- 3) Identify critical nodes and their activities and functions.
- 4) Develop target system models and utility measures.
- 5) Validate targets and "No-Hit" lists.
- 6) Define production requirements (use of collection assets).

c. Target development inputs:

- 1) Operation Plan Joint Target List Annex (OPLAN JTL). For a given operational area, the OPLAN JTL constitutes a target baseline. OPLAN JTLs are subsets of the national military intelligence integrated data base/integrated data base (MIDS/IDB) modified to meet the joint force requirements in various regions throughout the world. During peacetime, the unified command J2 modifies this database via inputs from both national agencies as well as assigned component forces.
- 2) Battlespace Geometry Management. Intelligence planners assess the battlespace geometry/restrictions and develop targets based on regional and geographic characteristics.
- 3) All source national agency support.
- 4) Enemy military capability studies.
- 5) Current intelligence assessments.
- 6) Component target nominations.
- 7) Joint Targeting Coordination Board inputs.
- 8) Existing basic encyclopedia (BE) numbered targets.
- 9) JFC/JFACC guidance.
- 10) Law of Armed Combat (LOAC) and Rules of Engagement (ROE) considerations.

d. Target development outputs:

- 1) Joint Target List (JTL). The operational JTL is the updated and refined OPLAN JTL received from the unified command, and serves as the initial list of targets. The JTL is the master target list that supports the CJTF's objectives, guidance, intent, and courses of action. It normally lists high-value targets (HVTs), which are later incorporated as high-payoff target (HPT) nominations during component wargaming. HVT lists result from an analysis of what the enemy needs to accomplish his mission; HPT lists are those HVT items which also further the aims of the CJTF's concept of operations. The JTL is not a prioritized list of targets, but contains prioritized target categories (e.g., command and control, airfields, lines of communication) listing specific targets. The CJTF prioritizes the JTL target categories according to his operations plan. This focuses the intelligence/target material production effort and provides guidance for the use of intel collection assets. Target information reports (TGTINFOREPs) from components update the JTL. Maintenance of the JTL is normally conducted by the JTCB or the CJTF's staff.
- 2) Joint Integrated Prioritized Target List (JIPTL). The JIPTL is a CJTF level product usually produced by the JFACC's Joint Air Operation Center (AOC). It prioritizes each target's relative importance and significance within a specific target system as well as to all other targets. [*Note: Prioritization does not necessarily denote operational sequencing.*]
- 3) Inputs to intelligence collection plan.
- 4) Restricted targets lists (targets not to be struck, or not to be engaged with certain systems).
- 5) The intelligence preparation of the battlefield event template.
- 6) Established Target Selection Standards (TSS). Established TSS define what makes a target suitable for attack (i.e., when it can be attacked, where it can be attacked, what target activity triggers the attack, and what degree of accuracy is required to locate the target prior to the attack).
- 7) Target information (general location, target type/category, common target/track number (CTN), specific location, disposition size, disposition, target speed and direction, surveyed target data, target identification specifics, and unit identification).

e. The J2 supports target development with resources of the Joint Intelligence Support Element (JISE). Component intelligence assets and intelligence organizations also contribute.

4. Weaponneering Assessment: The purpose of the weaponneering assessment phase is to provide various force application options for each target based upon desired results. The process depends on detailed intelligence analysis of target construction and vulnerabilities combined with operational assessments of weapons effects and delivery parameters. Weaponneering assessment determines the quantity, type, and mix of lethal and nonlethal weapons required to produce a desired effect. It is an

analysis of the best weapon combination for economy of force (the best bang for the buck). Timeliness is also a critical factor in weaponeering decisions. The short dwell nature of time-critical targets requires that the timely availability of an attack asset be an important factor in weapons selection.

a. Operational planners fuse the target and threat analysis with Joint Munitions Effectiveness Manual (JMEM) data and nonlethal effects in order to assess expected results. If desired destruction criteria will be met, and other factors are favorable (such as weapons and delivery system availability), a variety of options with weapons recommendations are assigned to each target on the JTL. Recommendations prescribe the amount and type of ordnance, as well as the number and type of delivery parameters to achieve desired effects.

1) Lethal force weaponeering parameters include target vulnerability, weapons effects, aimpoint selection, delivery errors, weather, damage criteria, and weapon reliability.

2) Nonlethal force weaponeering assessment is the assessment of the ability of friendly systems to observe activity, deceive, jam, affect (PSYOP), disrupt, or deny access to critical friendly targets. Nonlethal weaponeering is a significant part of command and control attack analysis conducted at the JTF level and by the command and control warfare (C2W) cell. This cell performs nonlethal targeting and weaponeering (effects and means) analysis to identify and match adversary C2 targets to friendly C2W and operational objectives.

b. Weaponeering assessment is not a prediction of results, but a statistical probability of weapons effects. It includes the detailed study and refinement of aimpoints, fuse delays, impact angles and velocities, weapons trajectories, number and type of weapons for employment (both air-to-surface and surface-to-surface), and recommended damage criteria. Weapons/munitions selection procedures vary depending on the assets of the component attacking the target, the nature of the target, and the time available to engage the target. The result of weaponeering assessment is a probability of damage against each target with the recommended weapons required to achieve the required level of damage.

5. Force Application. Force application is the selection of lethal or nonlethal forces for the mission. It integrates previous phases in the cycle and fuses weaponeering assessment with available forces. Intelligence and operations staffs work closely to optimize the force necessary to achieve the objective considering operational realities and available assets. Based on CJTF guidance, planners conduct force application planning to fuse target, weapons system, munitions, and nonlethal options.

a. The primary objective of force application is to sequence target attacks and synchronize the application of lethal and nonlethal force.

b. During force application, the components identify primary resources to execute missions and supporting requirements. Planners accomplish force packaging and task organization, and they may group various targets based on geographic location to facilitate economy of force and unity of effort. Likewise, a relatively high priority target may go unserved because of situational factors that render the target too force intensive or too risky to execute at the desired time.

c. Planners receive updated threat analyses for intended targets, including both air and ground threats en route to targets. If the threat is too high for successful mission accomplishment, the target is reevaluated for either a different weapons system to attack it or postponement of the attack until the threat is diminished. In either case, accurate intelligence assessment is a critical aspect of the force application process.

d. The key products from the force application phase are the Master Attack Plan (the Air Tasking Order (ATO) shell) for the air effort and the Attack Guidance Matrix (AGM) for the ground effort.

6. Execution Planning/Force Execution. The CJTF issues mission type orders directing commanders to execute operations. Component commanders and their staffs conduct mission planning.

a. **Execution Planning.** The ATO and AGM guide the personnel in the Air Operations Center in their preparation of schedules, missions, route planning, and tactics to execute attacks. Due to inevitable changes in the enemy situation (and thereby in the assumptions used in the force application phase), intelligence and operations cells analyze the ATO and AGM to validate whether or not they accurately address the current enemy situation. This analysis and validation process is a continuous function throughout execution planning. Intelligence preparation of the battlefield (IPB) procedures are used for time-critical targets (TCTs) and identify the probable locations where and times when TCTs may emerge. This allows execution planners to position target acquisition and strike assets to best respond to the forecasted areas. During execution planning, intel cells monitor target status and provide updates to current taskings as well as to the follow-on target development and weaponizing phases.

b. **Force Execution.** The combat operations section in the Air Operations Center monitors the execution of the ATO and provides real-time redirection of assets, re-attacks, and other taskings as the situation warrants. Mission execution requires the flexibility to impact unforeseen TCTs, which in turn requires a well thought-out intel collection plan.

7. Combat Assessment (CA). CA directly affects all other phases of the Joint Targeting Process. CA is the determination of the overall effectiveness of force employment during military operations. Its purpose is to determine if the required

effects on the enemy envisioned in the campaign plan are being achieved by the components to meet the CJTF's overall concept.

a. CA answers three questions. Were the operational and tactical objectives met by force employment? Did the forces employed perform as expected? What's needed to fix any discrepancies?

b. The CJTF is responsible for establishing a dynamic system to support combat assessment for all other joint force components. The J3, assisted by the J2, is responsible for coordinating CA.

c. Intel supports CA by providing objective assessments on the overall impact of military operations against enemy forces, possible enemy courses of action, and predictions of enemy intent. Input to these assessments include mission reports (MISREPS), aircraft inflight reports (INFLTREPS), intelligence summaries (INTSUMS), reconnaissance reports, national systems, and reports from joint reconnaissance, surveillance and target acquisition (RSTA) systems. CA includes battle damage assessment (BDA), munitions effectiveness assessments (MEAs), and re-attack recommendations (RRs).

d. **BDA.** Battle damage assessment attempts to determine the impact of operations against individual targets and target systems. BDA is the estimate of physical, functional, and target system damage resulting from the application of military force, either lethal or nonlethal, against a predetermined objective. Although primarily an intelligence responsibility, accurate BDA depends on the coordination and integration between operations and intel. BDA uses all source intel assets to assess target damage and response. During each phase of the BDA process, determinations are made on what adjustments, if any, are required in other phases of the Joint Targeting Process.

- 1) Phase I BDA - Initial. This phase is the initial analysis, based primarily on visual observation of the target and usually derived from a single source. Inputs come from aircrew debriefs and mission reports (MISREPS), weapon system video, manned and unmanned imagery reconnaissance, and other classified sources. The unit controlling the attack asset develops Phase I BDA. Reports state whether a target was hit or missed and include initial estimates of damage.
- 2) Phase II BDA - Supplemental. This phase reviews all Phase I damage assessments and amplifies the initial analysis. Phase II draws on all source intel and operational data to determine functional damage to a target and an estimate of impact on the target system. This phase requires the integration of theater and national source information. The theater joint intelligence center (JIC) has access to these sources and provides significant support. Signals intelligence (SIGINT), imagery intelligence (IMINT), and measurement and signature intelligence (MASINT) sources are used.

3) Phase III BDA - Target System Assessment. This phase is primarily performed in large-scale operations. It produces a target system assessment by fusing all supplemental BDA with the experience of subject matter experts. The bottom line question during Phase III is, "How successful have our efforts been to degrade or deprive the enemy's warfighting capabilities?"

e. **MEA.** Munitions effectiveness assessment provides feedback on how well ordnance, tactics, weapons systems, and platforms performed in combat. MEA is conducted concurrently and interactively with BDA to evaluate ordnance, weapon system, and tactics performance and continues over an extended period of time beyond the BDA process. MEA evaluates weapons parameters such as delivery accuracy, fusing, and damage mechanisms (blast, fragmentation, and penetration). Analysts identify deficiencies and make recommendations for procedural changes, different tactics, or system modifications.

f. **RR.** The re-attack recommendation is a combined operations and intelligence function which develops recommendations on which targets may require re-attack. This is based upon the enemy's remaining capability, capacity, and potential for recuperation. The RR process attempts to solve deficiencies identified during the BDA and MEA processes. Reassessment of objectives, target selection, vulnerabilities, timing, tactics, weapons, and munitions factors into the new recommendations. RR are passed back into the Joint Targeting Process at the target development, force application, and execution planning/force execution phases. Significant RR would "re-start" the targeting process with development of new commander's objectives and guidance.

APPENDIX J
Joint Fires Attack Systems
Planning Considerations

1. **Purpose.** This annex provides a quick reference of planning factors for the employment of attack systems for joint fires operations.

2. Deep Attack Systems Organic to the Corps.

a. **ATACMS.** The Army Tactical Missile System is a missile fired from a Version 6.06 Multiple Launch Rocket System (MLRS) launcher. The corps will typically have at least one MLRS battalion (27 launchers), and each division within the corps will have an MLRS battery (9 launchers.) Each launcher contains 2 missiles. Each missile can be fired at different targets within an 18 second interval. The missile has the following capabilities:

- 1) **Range.** Block 1: Max = 165 km, Min = 20 km.
Block 1A: Max = 300 km, Min = 20 km.
- 2) **Warhead.** The Block 1 warhead consists of 950 M74 antipersonnel/anti-material (APAM) bomblets. The Block 1A has 300 APAM bomblets. Each bomblet has a 15 meter fragmentation radius, but has no shaped-charge anti-armor effect. This warhead is extremely effective against soft, stationary targets, is marginally effective against lightly armored or moving targets, and has little or no effect on hard, armored targets.
- 3) **Burst Radius.** The warhead can be set at three different bursting diameters. The sizes are classified.
- 4) **Missile speed** is Mach 2+. Time of flight for the missile to Block 1 maximum range is 5.4 minutes.
- 5) The apogee for the missile's flight path is 36,500 meters or 120,000 feet above ground level.
- 6) **Response time** for a mission is 15-60 minutes. It depends on factors such as whether or not the launcher is already in a firing position, time required to clear/coordinate airspace, and range.

b. **Apaches.** The AH64 Apache is the Army's premier attack helicopter and is employed in operations deep into the enemy rear area. Mission planning factors are:

- 1) 24 Apaches per battalion, 8 Apaches per company. A corps will typically have a regiment with 3 Apache battalions, and each division within the corps will have 1 Apache battalion.

2) In ideal conditions, an Apache unit can execute a planned mission 1 hour after a Go/No Go decision. A change of mission can require 2-6 hours to execute.

3) Mission Range.

- a) No external fuel tanks: 170 km with 16 Hellfire Missiles.
- b) One external fuel tank: 310 km with 12 Hellfire Missiles.
- c) Two external fuel tanks: 430 km with 8 Hellfire Missiles.

4) Weapons Ranges.

- a) Hellfire Missile: 8 km.
- b) 30mm Gun: 3 km.
- c) 2.75" Rocket with Mk66 Motor: 9 km.
- d) 2.75" Rocket with Mk40 Motor: 7 km.

5) Weather Considerations.

- a) Unfavorable: Ceiling < 800', Visibility < 3500 m.
- b) Marginal: Ceiling 800' - 1200', Visibility 3500 m - 5000 m.
- c) Favorable: Ceiling > 1200', Visibility > 5000 m.

3. Air Force Systems.

a. F15E Eagle. This is a two-seat, dual role fighter for all-weather air-to-air and deep interdiction missions. It is suitable for low-altitude, high-speed penetration, and precision attack on tactical targets at night and in adverse weather. Armament includes: one internally mounted M61A1 20mm six-barrel cannon; AIM-9L/M Sidewinder and AIM7F/M Sparrow; or AMRAAM carried externally, and various types of free-fall or guided air to ground munitions.

b. F-16 Fighting Falcon. This is a single-seat, multi-role aircraft capable of performing precision strike, night attack, and beyond-visual-range interception missions. It employs both air-to-air and air-to-surface weapons. Armament includes: one M61A1 20mm multi-barrel cannon, AMRAAM and AIM-9L/M air-to-air missiles; HARM; and various types of free-fall or guided air to ground munitions.

c. A-10 Thunderbolt II. This aircraft is designed specifically for CAS, and offers a combination of large military load, long loiter, and wide combat radius. Armament includes: one 30mm GAU-8/A Gatling Gun; eight under wing hard points and three under fuselage for up to 16,000 pound of ordnance; including various types of free-fall or guided bombs, combined effects munitions dispensers, six AGM-65 Maverick missiles, or four AIM-9 Sidewinder missiles, and jammer pods. Chaff and flares are carried internally to counter radar or infrared directed threats.

d. F-117A Nighthawk. This is the first stealth fighter designed to exploit low-observable technology. Its maximum level speed is 646 mph with an unrefueled mission radius of 691 miles while carry a 5000 pound weapon load. Armament includes: full internal carriage of a wide variety of tactical weapons including laser guided 2000 pound munitions.

e. B-52 Stratofortress. This aircraft conducts long-range conventional and nuclear missions. It is capable of delivering a wide range of weapons, to include: bombs, air-dropped mines, and cluster bombs.

f. B-1 Lancer. This aircraft conducts long-range conventional and nuclear missions. Armament in a non-nuclear role: up to 84 MK82 500 pound bombs or MK36 500 pound mines. The forward and aft bays can be combined to carry eight cruise missiles on a common strategic rotary launcher. Six under fuselage stores stations can carry an additional 12 cruise missiles.

g. B-2A Spirit. This aircraft employs low-observable stealth technology to minimize the possibility of detection. Current plans emphasize the B-2's conventional capabilities. Armament in a conventional role: eighty 500 pound bombs or various other conventional weapons.

h. AC-130H/U Spectre. Two versions of the AC-130 are operated by the Air Force Special Operations Command. The AC-130H is equipped with a digital fire control computer, two fixed 20mm Vulcan cannon, one trainable 40mm cannon, and a trainable 105mm howitzer. The AC-130U will replace the two 20mm cannon with one trainable 25mm cannon while retaining the 40mm cannon and 105mm howitzer. All weapons can be slaved to sensors during adverse weather operations.

i. EC-130. This Special Operations aircraft is an airborne electronic broadcasting system with a primary mission to broadcast psychological operations programs in the standard AM/FM radio, television, short-wave and military communications bands. It has a secondary mission of electronic attack.

4. Marine and Naval Air Systems.

a. F18 Hornet. This is a multi-mission, carrier-based aircraft used as both an air defense fighter and in an offensive role as an attack aircraft with a bomb load. Armament includes: maximum weapons load of 16,000 pounds which can consist of a selection of Sidewinder and Sparrow missiles, and 20mm cannon, HARM, general purpose bombs, rockets, mines, Walleye, Maverick, and Harpoon.

b. A-6 Intruder. This aircraft is designed for attack missions against sea and land targets under day and night, all-weather conditions with or without visual reference to target. Armament includes: maximum weapons load of 18,000 pounds, which can consist of bombs, mines, special weapons, missiles, rockets, Harpoon, AIM-9, and all general purpose and cluster bombs.

c. AV-8B Harrier. This is a subsonic, high performance aircraft capable of operating from seagoing platforms, expeditionary airfields, and remote tactical landing sites. It is found in the USMC Marine Air-Ground Task Force. It is capable of CAS, interdiction, armed reconnaissance, and counterair operations. Armament includes:

maximum weapons load of 8,000 pounds of external ordnance and a 25mm internal gun.

5. Naval Surface Fires.

a. Naval Gunfire:

<u>Ship</u>	<u>Weapon</u>	<u>Rounds</u>	<u>Max Range</u>
Destroyer (DD)	5"	600	24 km
Guided Missile Cruiser (CN/CGN)	5"	1200	24 km
Guided Missile Destroyer (DDG)	5"	1200	24 km
Guided Missile Frigate (FFG)	5"	1200	24 km

b. Tomahawk Land Attack Missile C (TLAM).

<u>Ship</u>	<u>Number</u>	<u>Range</u>
Destroyer (DD)	8	Approx. 1100 km
Guided Missile Cruiser (CN/CGN)	32	Approx. 1100 km
Guided Missile Destroyer (DDG)	24	Approx. 1100 km
Guided Missile Cruiser (CG)	45	Approx. 1100 km

APPENDIX K

Joint Fires References

- CJCSM 3500.03, "Joint Training Manual for the Armed Forces of the United States"
- CJCSM 3500.04, "Universal Joint Task List"
- Joint Pub 2-0, "Joint Doctrine for Support to Operations"
- Joint Pub 3-0, "Doctrine for Joint Operations"
- Joint Pub 3-03, "Doctrine for Joint Interdiction Operations"
- Joint Pub 3-09, "Joint Fire Support"
- Joint Pub 3-10, "Doctrine for Joint Rear Area Operations"
- Joint Pub 3-13, "Joint Doctrine for Command and Control Warfare (C2W) Operations"
- Joint Pub 3-51, "Electronic Warfare in Joint Military Operations"
- Joint Pub 3-52, "Doctrine for Joint Airspace Control in the Combat Zone"
- Joint Pub 3-54, "Joint Doctrine for Operations Security"
- Joint Pub 3-55, "Doctrine for Reconnaissance, Surveillance and Target Acquisition Support for Joint Operations (RSTA)"
- Joint Pub 3-56.1, "Command and Control for Joint Air Operations"
- Joint Pub 3-58, "Joint Doctrine for Military Deception"
- Joint Pub 5-0, "Doctrine for Planning Joint Operations"
- Joint Pub 5-00.2, "Joint Task Force Planning Guidance and Procedures"
- Joint Task Force Headquarters Mission Training Plan

- FM 6-20, "Fire Support in the Airland Battle"
- FM 6-20-10, "Tactics, Techniques, and Procedures for the Targeting Process"
- FM 34-1, "Intelligence and Electronic Warfare Operations"
- FM 34-130, "Intelligence Preparation of the Battlefield"
- FM 90-14, "Rear Battle"
- FM 90-15, "Multi-Service Procedures for the Joint Suppression of Enemy Air Defenses"
- FM 90-21, "(JAAT) Multi-Service Procedures for Joint Air Attack Team Operations"
- FM 100-5, "Operations"
- FM 100-6, "Information Operations"
- FM 100-7, "The Army in Theater Operations"
- FM 100-13, "Battlefield Coordination Detachment (BCD) (C Draft)"
- FM 100-15, "Corps Operations"
- FM 100-26, "The Air-Ground Operations System"
- FM 101-5, "Command and Control"
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- Air Land Sea Application Center's "Responsive Air Support Plan"
- Air Land Sea Application Center's "The Joint Targeting Process and Procedures for Targeting Time-Critical Targets"
- Air Combat Command Regulation 2-1, "Air Operations"
- USAF Deputy Chief of Staff, Plans and Operations, Pamphlet, "JFACC Primer"

- Air Ground Operations School's "Joint Air Operations Staff Course Student Volumes 1-8"
- Third U.S. Army/Army Forces Central Command (ARCENT), "Deep Operations Standing Operating Procedures (SOP)"
- Joint and Multi-Service Distributed Training Testbed (JMDT2) product prepared for U.S. Air Forces Central Command (AFCENT), "Joint Targeting Planning Training Guide"

Appendix L

Joint Fires Abbreviations

A

A2/C2	Army Airspace Command and Control
AADC	Area Air Defense Commander
AAR	After Action Review
ABCCC	Airborne Battlefield Command and Control Center
ACA	Airspace Control Authority
ACA	Airspace Coordination Area
ACC	Air Component Commander
ACO	Airspace Control Order
ACP	Airspace Control Plan
ACP	Ammunition Control Point
ADA	Air Defense Artillery
ADIZ	Air Defense Identification Zone
ADOCS	Automated Deep Operations Coordination System
ADS	Airspace Deconfliction System
AETACS	Airborne Elements of the Theater Air Control System
AFFOR	Air Force Forces
AGM	Attack Guidance Matrix
AI	Air Interdiction
ALO	Air Liaison Officer
ANGLCO	Air and Naval Gunfire Liaison Company

AO	Area of Operations
AOC	Air Operations Center
AOR	Area of Responsibility
APS	Advanced Planning System
ASOC	Air Support Operations Center
ATACMS	Army Tactical Missile System
ATO	Air Tasking Order
AWACS	Airborne Warning and Control System

B

BCD	Battlefield Coordination Detachment
BDA	Battle Damage Assessment

C

C2	Command and Control
C2W	Command and Control Warfare
C3	Command, Control, and Communications
C3CM	Command, Control, and Communications Counter-Measures
C4	Command, Control, Communications, and Computers
C4I	Command, Control, Communications, Computers, and Intelligence
CA	Combat Assessment
CAS	Close Air Support
CCIR	Commander's Critical intelligence Requirements
CIC	Combat Intelligence Center

CJTF	Commander, Joint Task Force
COA	Course of Action
COMINT	Communications Intelligence
COMSEC	Communications Security
CP	Command Post
CSR	Controlled Supply Rate
CTAPS	Contingency Theater Automated Planning System

D

DASC	Direct Air Support Center
DASC(A)	Direct Air Support Center (Airborne)
DCA	Defensive Counter-Air
DCAOC	Defense Communications Agency Operations Center
DEFCON	Defense Condition
DGAT	Day Guidance, Apportionment, and Targeting
DGZ	Designated Ground Zero
DMPI	Desired Mean Point of Impact
DOCC	Deep Operations Coordination Cell
DOD	Department of Defense
DS	Direct Support
DST	Decision Support Template
DSU	Direct Support Unit

E

ECM	Electronic Counter-Measures
EEFIR	Essential Elements of Friendly Information Requirements
EEI	Essential Elements of Information
ELINT	Electronic Intelligence
EOB	Electronic Order of Battle
EW	Electronic Warfare
EWO	Electronic Warfare Officer

F

FA	Field Artillery
FAC	Forward Air Controller
FAC-A	Forward Air Controller (Airborne)
FASCAM	Family of Scatterable Mines
FFA	Free Fire Area
FFIR	Friendly Forces Information Requirements
FLOT	Forward Line of Own Troops
FSCC	Fire Support Coordination Center
FSCL	Fire Support Coordination Line
FSCM	Fire Support Coordination Measure
FSCOORD	Fire Support Coordinator
FSE	Fire Support Element

G

GAT Guidance, Apportionment, and Targeting

GPS Global Positioning System

H

HIDACZ High Density Airspace Control Zone

HUMINT Human Intelligence

HPT High Payoff Target

HPTL High Payoff Target List

HQ Headquarters

HVT High Value Target

HVTL High Value Target List

I

IFF Identification Friend or Foe

INFLTREP In-Flight Report

IIR Intelligence Information Reports

IMINT Imagery Intelligence

INTREP Intelligence Report

INTSUM Intelligence Summary

IPB Intelligence Preparation of the Battlefield

J

JAAT Joint Air Attack Team

JAOC Joint Air Operations Center

JCCC	Joint Communications Control Center
JCS	Joint Chiefs of Staff
JDSS	JFACC Decision Support System
JFACC	Joint Force Air Component Commander
JFC	Joint Force Commander
JFFC	Joint Force Fires Coordinator
JFFC-E	Joint Force Fires Coordination Element
JFLCC	Joint Force Land Component Commander
JFMCC	Joint Force Maritime Component Commander
JFMDC	Joint Force Missile Defense Coordinator
JFSOFC	Joint Force Special Operations Forces Commander
JGAT	Joint Guidance, Apportionment, and Targeting
JIC	Joint Intelligence Center
JIPTL	Joint Integrated Prioritized Target List
JMDT2	Joint and Multi-Service Distributed Training Testbed
JMEM	Joint Munitions Effectiveness Manual
JOA	Joint Operations Area
JPOTF	Joint Political Operations Task Force
JPT	Joint Planning Tool (also referred to as JFACC Planning Tool)
JRAC	Joint Rear Area Coordinator
JRTOC	Joint Rear Tactical Operations Center
JSTARS	Joint Surveillance Target Attack Radar System

JRCC	Joint Rescue Coordination Center
JSEAD	Joint Suppression of Enemy Air Defenses
JSOTF	Joint Special Operations Task Force
JSRC	Joint Search and Rescue Center
JTCB	Joint Targeting Coordination Board
JTF	Joint Task Force
JTIDS	Joint Tactical Information Distribution System
JTL	Joint Target List
JTTP	Joint Tactics, Techniques, and Procedures

L

LANTIRN	Low Altitude Navigation and Targeting for Night
LCC	Land Component Commander
LGB	Laser Guided Bomb
LNO	Liaison Officer
LOAC	Law of Armed Combat
LOC	Line of Communication
LRSU	Long Range Surveillance Unit

M

MAAP	Master Air Attack Plan (also MAP - Master Attack Plan)
MAGTAF	Marine Air-Ground Task Force
METT-T	Mission, Enemy, Troops Available, Terrain (w/weather), and Time Available

MIJI	Meaconnoing, Intrusion, Jamming, and Interference
MISREP	Mission Report
MLRS	Mobile Launch Rocket System
MRR	Minimum Risk Route
MSC	Major Subordinate Command
MSR	Main Supply Route
MTP	Mission Training Plan
N	
NAI	Named Area of Interest
NALO	Naval Liaison Officer
NCA	National Command Authority (President and Secretary of Defense)
NCO	Non-Commissioned Officer
NFA	No Fire Area
NGAT	Night Guidance, Apportionment, and Targeting
NGFS	Naval Gunfire Support
NSF	Naval Surface Fires
O	
OB	Order of Battle
OCA	Offensive Counter Air
OPCOM	Operational Command
OPCON	Operational Control
OPLAN	Operations Plan

OPORD Operations Order

P

PGM Precision Guided Munition

POL Petroleum, Oils, and Lubricants

POLAD Political Advisor

PSYOPS Psychological Operations

PSYWAR Psychological Warfare

PW Prisoner of War (also referred to as POW)

R

RAP Recognized Air Picture

RFA Restricted Fire Area

RFI Request for Information

RFL Restricted Fire Line

RII Request for Intelligence Information

ROE Rules of Engagement

ROZ Restricted Operations Zone

RSTA Reconnaissance, Surveillance, and Target Acquisition

S

SA Strategic Attack

SACC Supporting Arms Coordination Center

SADARM Search and Destroy Armor Munitions

SAM	Surface-to-Air Missile
SAR	Search and Rescue
SCI	Sensitive Compartmentalized Information
SCIF	Sensitive Compartmentalized Information Facility
SEAD	Suppression of Enemy Air Defense
SEMA	Special Electronic Mission Aircraft
SHORAD	Short Range Air Defense
SIGINT	Signals Intelligence
SITREP	Situation Report
SOF	Special Operations Forces
SOLE	Special Operations Liaison Element
SPINS	Special Instructions

T

TACC	Tactical Air Control Center (USMC/USN term)
TACFIRE	Tactical Fire Direction System
TACON	Tactical Control
TACP	Tactical Air Control Party
TACSAT	Tactical Satellite
TADIL	Tactical Data Link
TARN	Tactical Air Request Net
TCF	Tactical Combat Force
TCT	Time-Critical Target
TDC	Track Data Coordinator
TIRS	Terrain Index Reference System
TLAM	Tomahawk Land Attack Missile
TMD	Theater Missile Defense
TMD	Tactical Mission Data
TNL	Target Nomination List
TOO	Target of Opportunity
TOT	Time-on-Target
TPFDD	Time Phased Force Deployment Data
TRP	Target Reference Point
TRS	Target Reference System
TTP	Tactics, Techniques, and Procedures
TTT	Time-to-Target

TVA Target Value Analysis

U

UAV Unmanned Aerial Vehicle

UHF Ultra-High Frequency

UJTL Universal Joint Task List

USMTF United States Message Text Format

USTRANSCOM United States Transportation Command

UTM Universal Transmercator

V

VHF Very-High Frequency

W

WAM Wide Area Munition

WEZ Weapons Engagement Zone

WGS World Grid System

WIA Wounded in Action

WMD Weapons of Mass Destruction

WOC Wing Operations Center